ABSTRACT OF

An Address

ON

ARTERIO-SCLEROSIS.

Delivered before the Cardiff Medical Society

BY W. LYNE BLIGHT, M.D. DURH., F.R.C.S. ENG.

AFTER a brief introduction on the history of our gradually evolving conception of arterio-sclerosis, Dr. Blight continued:—

INCIDENCE AND CAUSATION.

Arterio-sclerosis is a disease which, although mainly incidental to the middle period of life and becoming progressively and cumulatively worse as age advances, yet occurs in young people and even in infants. It is more common in men under 50 years of age than in women, but after the climacteric period is passed it is as frequent in women as in men, if not more so. There are four general causes of arterio-sclerosis: (1) The normal wear and tear of life; (2) the acute infections; (3) the intoxications; and (4) those combinations of circumstances which keep the blood pressure high.

The occupations most subject to the wear and tear of life are those of navvies, blacksmiths, porters, labourers, soldiers, and mountaineers, whose persistent use of muscles over prolonged periods to an extent sufficient to cause hypertrophy of the heart is a most potent factor in causing a heightened blood pressure. The evidence of internal strain as a factor in raising the blood pressure is shown by the presence of sclerosis of the pulmonary artery in cases of prolonged mitral stenosis. Of the acute infections causing the disease the most important is syphilis, the others being the exanthems, influenza, and tuberculosis. Syphilis is the chief cause of arterio-sclerosis in infants and young people. Of the intoxications, the chief exogenous poisons are alcohol, lead, and tobacco. The chief endogenous poisons are those of gout, diabetes, Bright's disease, and obesity.

In the prodromal stages of the disease a spasm of the arterioles is chiefly brought about by irritation of toxic products causing a contraction of the muscular coat, which becomes hypertrophied, producing an increased peripheral resistance, with a compensatory increased force of the heart's action, causing its hypertrophy and a rise in the arterial pressure, which is the most frequent result of the persistent use of muscles. The normal blood pressure in persons under 30 years of age is 125 mm. Hg, and from this age onwards the blood pressure increases, but a pressure above 150 mm. Hg, except in the aged, is abnormal. Other causes of increased arterial pressure are excesses in food and drink. Dr. F. A. Mahomed believed that this high pressure in the arteries precedes the development of renal disease before the albuminuric stage of scarlatinal nephritis, and that in the red granular contracted kidney the disease was primarily in the blood-vessels generally. The regular or frequent use of adrenalin and other agents which raise the blood pressure causes a necrosis of the muscular fibre and elastic tissue of the media.

In the early stage of tubal nephritis high arterial pressure can only be produced by contraction of the muscular walls of the arterioles; and even in certain chronic forms this must still play an important part, but the presence of endarteritis obliterans produces and maintains the permanent peripheral resistance which leads to the high arterial tension of renal cirrhosis, as a physiologically hypertrophied heart cannot raise arterial pressure unless it is supported by a resistance in the systemic arterioles.

The blood-vessels are always in a state of activity, and they live under three main conditions: (1) That use maintains and in a measure sustains structure; (2) that over-use leads to degeneration; and (3) that at about 60 years or 70 years of age the arteries are unable to endure any longer the wear and tear of life; and if there be a poor variety of muscular and elastic tissue and fibre, as sometimes occurs not only in individuals but in whole families, the incidence of the disease, other conditions being equal, occurs at a much earlier period of life.

SYMPTOMS.

Arterio-sclerosis disturbs function by lessening the amount of blood supplied to an organ unless the blood pressure rises concurrently with the narrowing of the lumen of the vessel. The result is a slow progressive atrophy with gradual loss of function in all the areas supplied by a sclerotic vessel; and when the artery becomes finally obliterated, especially if it occur suddenly, necrosis and gangrene of the part normally supplied by the sclerotic vessel occur; hence gangrene of the foot in the arterio-sclerosis of diabetes. An artery attacked by the sclerotic process becomes irritable and liable to spasm; there is a sudden loss of blood to the part, with pain, loss of arterial pulse, and loss of function. The pain, when occurring in advanced stages of the disease, for instance, in the calf muscles, is frequently of a very severe character, and is more liable to occur in those patients who are of a full habit of body and have a gouty diathesis, frequently occurring in the night, and only relieved by opium. These vascular crises are the cause of the transient mono- or hemi-plegias, aphasia, paraplegia, transient amaurosis, anginal attacks, and probably of lead colic and the crises of tabes.

The premonitory symptoms of arterio-sclerosis are frequently evident in a middle-aged patient who comes to us complaining of headache, drowsiness, morning fatigue, feeling more tired when he gets up than when he went to bed, ineptitude for work, coldness of the extremities, tinnitus, attacks of migraine or neuralgia, together with high-pressure pulse and accentuated second sound of the heart. On the other hand, a middle-aged man may have a feeling of good health and may be able to perform the ordinary duties of his life, complaining of no symptom and perhaps priding himself on his fitness, and in whom no organic lesion was suspected to exist. Yet he may die suddenly by rupture of a cerebral vessel, thrombosis of a coronary artery, rupture of a small aneurysm, or acute dilatation of the heart. Death is thus the only intimation of anything being wrong with his system, demonstrating the great powers of adaptation of the body.

Another type of case is that of a man, beyond the middle period of life, who has worked hard with his muscles, eaten much, and drunk hard; he has a persistent elevation of the arterial blood pressure and for some years has been feeling unwell, suffering from insomnia, cerebral confusion, despondency, and nervousness. The insomnia is so distressing that the patients often resort to taking morphia or

other hypnotic. The palpable arteries are found thickened and tortuous; there is an increased vigour of the cardiac impulse, the apex beat is displaced slightly outwards, the first heart sound is faint, dull or prolonged, or reduplicated or replaced by a murmur, and the second sound is accentuated with a loud ringing sound of a metallic quality.

An early symptom of the general disease is a slight pallor. As the vascular degeneration progresses the nutrition of the body generally and certain organs in particular suffer, the clinical history varying in every case according to the organ which suffers most and suffers earliest, whether brain, heart, or kidney; bronchitis and emphysema may be the first symptoms indicative of the disease. There is a gradual atrophy of the parenchyma of the various organs and tissues of the body, so that the patient ages visibly within a few years, loses his intellectual keenness and bodily vigour, the skin becomes flabby and lax, and the hair turns prematurely grey, though neither this nor arcus senilis is pathognomonic of arterio-sclerosis; the urine shows traces of albumin and tube casts may be present. Defective metabolism is frequently indicated by dyspeptic flatulence and intestinal troubles of various kinds. Anæmia becomes manifest. A patient under 40 years of age, the subject of this disease, will have symptoms of neurasthenia, be of an irritable temper, emotional, and suffer from sleeplessness.

It is probable the toxic agents are many and various, and arise from defective nitrogenous metabolism, and probably, as Bouchard suggests, consist of leucomaines produced in the body and ptomaines absorbed from the alimentary canal and improperly dealt with by the liver. When the sclerosis affects the cerebral vessels an early symptom associated with high blood pressure is headache, usually frontal and continuous, occasionally paroxysmal and resembling migraine. Another symptom is vertigo, usually transient and not so severe as in Ménière's disease, which may be accompanied by tinnitus and may occur with epileptiform crises, or, as in Stokes-Adams disease, with epileptiform and syncopal attacks with a permanently slow pulse associated with high arterial pressure.

Another important manifestation is the occurrence of transitory disturbance of function of parts of the brain or cord, leading to mono- or hemi-plegia, amaurosis, aphasia, and paraplegia, and ending in complete recovery. These attacks may be frequent, sometimes occurring on one side of the body and sometimes on the other, but their transitory nature, frequent occurrence, and complete recovery distinguish these attacks, probably due to angiospasm of the cerebro-spinal arteries, from the more serious ones of hæmorrhage, thrombosis, and embolism. Associated with these symptoms are various neurasthenic conditions, such as absence of mind, temporary derangement of mind, irritable temper, confusion of thought, dulness of comprehension or perception, failure of memory and faulty judgment in simple matters; an inequality in the size of the pupils, and exaggerated reflexes may be present, leading to a progressive dementia in which the grandiose delusions are usually absent.

Cardio-vascular System.

In the cardio-vascular system the sclerosis affects the valves, the myocardium, and the coronary arteries. The lesions of the aortic and mitral valves are due to a sclerotic process in the segments identical with that which goes on in the vessels. Most cases of aortic insufficiency in men occur from this cause. In the myocardium in the early stage there is a pure hypertrophy of the left ventricle owing to increased peripheral resistance and of the right ventricle to a less and variable extent. In the diffuse form of the disease there is a gradual failure of the hypertrophied cardiac muscle, which is a common and serious event, leading to dilatation, orthopnœa, slight œdema of the feet and beneath the eyes, cough and perhaps blood-stained expectoration, and progressive asystole. According to Basch, dyspnœa is the only criterion of cardiac insufficiency due to sclerosis, latent or incipient. It is often a most distressing symptom and frequently occurs in the night. An important subjective feature is breathlessness, especially on going upstairs or ascending a slight hill.

The objective symptoms are manifested by the visible, tortuous, pulsating, and thickened arteries, especially noticeable in the emaciated, senile, or prematurely senile patient. In the corpulent the only objective symptom of arterial change may be a high-pressure pulse at the wrist, the artery being firm and incompressible. A sphygmographic pulse tracing shows a gradual upstroke, no percussion wave, and a gradual down stroke in which the dicrotic wave is hardly visible. The pulse should be taken when the patient is standing up and compared with that when the patient is sitting or lying down. In the latter case under normal conditions it should become slower, but if it maintains its standing-up rate the state of tension in the arteries is unnaturally high or if the pulse become more frequent in the lying-down position it shows the still more advanced and serious state of the sclerosis. It is necessary to distinguish between the hard sensation conveyed to the finger by a high-tension pulse simply, in which case the pulse is scarcely felt when empty, and that in which there is a sclerosis and calcification of its walls and in which the artery is as prominent when empty as when full. These two conditions may, however, coexist.

The nutrition of the heart substance becomes inadequate from the increased resistance to be overcome and the participation of the nutrient vessels of the heart in the degenerative process, so that whilst the heart has increased work to do the quality and quantity of the blood-supply become progressively more impaired and the myocardium undergoes fatty or fibroid degeneration, resulting in a dilatation of the ventricle with a mitral murmur appearing, and dropsy, due partly to cardiac failure, partly to the hydræmic condition of the blood, and partly to the altered condition of the vessel walls, gradually increases in extent, the patient ultimately dying from hypostatic pneumonia. Myocardial degeneration and weakness are frequent results of the narrowing of the orifices of the coronary arteries by sclerosis, which also causes anginal attacks in young syphilitic subjects, but these attacks are more frequent when the main branches are involved. Dr. Mott believes that angina pectoris occurs especially in cases of increased peripheral resistance, and is not due to a mere stenosis of the coronary arteries without this resistance. The coronary arteries may be involved in this disease out of all proportion to the other vessels, and sudden death may occur in middle-aged men who had never had any cardiac symptoms, but on post-mortem examination a gradual fibrosis or perhaps areas of anæmic necrosis with softening and occasional ruptures are found.

Renal Symptoms; Hæmorrhages.

Although renal symptoms supervene in a large number of cases, widespread arterio-sclerosis may occur without nephritis or recognisable cause. The disease may be associated with small contracted granular kidney or come on insidiously in gout or chronic lead poisoning. The true arterio-sclerotic kidney is a red beefy organ which is firm, hard, and dark in colour, not at first reduced in size, sometimes even enlarged. Very often there are large flat areas of atrophy of the cortex, or a large section may be involved in consequence of an obliteration of the arteries passing to the part. The urine may at first contain no albumin, or if present it is not large in amount. The specific gravity is normal or sometimes high. Later on the albumin becomes larger in amount, and sometimes with cardiac dilatation the urine becomes scanty, with a large amount of albumin and numerous tube casts due to an intercurrent nephritis.

Hæmorrhages into the retina and choroid, epistaxis, hæmoptysis, hæmatemesis (which may be fatal), hæmaturia, and hæmorrhages into the subcutaneous tissue may occur as the result partly of high arterial pressure and partly of arterio-sclerosis. It was pointed out by Dr. Mahomed that even when the patient is much blanched by loss of blood the pressure in the arteries is still excessive.

TREATMENT.

The prognosis depends upon the stage of the disease. In the early stage of high arterial pressure much may be done by hygienic measures to prevent and arrest the disease. The patient should avoid all conditions which interfere with the nutrition of the body and lead as peaceful a life as possible, unattended by any mental worry or physical strain. Although a protracted holiday is helpful, it is not advisable for the patient to give up work entirely, but rather to lessen it in amount, and this will depend on whether marked cardiac failure, mental changes, or pronounced local features are present, and the advice will be given accordingly. Warm baths or occasional Turkish baths with friction and massage are helpful. A most important point in the treatment at this stage is that the food should be lessened in quantity and meat food almost abolished, as this, with the general mode of life, is the best way of lowering blood pressure. Natural aperient waters, as those of Cheltenham, in a moderate amount are beneficial. Generally speaking, all alcoholic liquors should be prohibited. The most useful drugs are amyl nitrite, trinitrin, erythrol tetranitrite, and sodium nitrite.

When fibrosis and calcification have taken place the damage is irreparable, but still the symptoms may be relieved and the arterio-sclerosis prevented from increasing. A milk diet is the best, especially at night, and when the patient suffers from a bad headache, dyspnœa, and insomnia these symptoms will often then disappear. In addition to milk as a general diet the patient may have oysters, fish—excepting those of the crustacean order—most vegetables, bread, butter, and buttermilk, and plenty of fruit. Iodide of potassium given for a period of some months has been most frequently used, but authorities differ as to its beneficial effect.

PTOMAINE POISONING AT LEEDS.—An outbreak of ptomaine poisoning in the Woodhouse district of Leeds continues to cause some anxiety. There are 120 cases, the condition of six of whom is still critical, and one death has been reported. The outbreak was first reported on May 22nd.

RHEUMATIC FEVER AND RHEUMATOID ARTHRITIS:

THE GEOGRAPHICAL FACTOR.

BY J. T. CLARKE, M.R.C.S., L.R.C.P. LOND., D.P.H.

VARIOUS theories have been published in the attempt to expound the cause of rheumatoid arthritis, but that none of them have been satisfactory is shown by the large amount of correspondence following any paper on the subject. In this paper I shall bring forward what I believe to be an unrecognised fact, and shall endeavour to show how it bears on some of the more common theories. I shall try to demonstrate that the geographical distribution of rheumatic fever and rheumatoid arthritis is the same, and shall argue that local as apart from universal distribution points rather to a specific cause than to the truth of any of the other theories of causation.

I must mention at the outset that Hirsch's book, which is still quoted as an authority on the geographical distribution of disease, was published as far back as 1886, and that there is much reason for correcting some of his statements; and as under the heading of rheumatism he "disclaims the possibility of making any sharp distinction between the several morbid processes included under the term rheumatism," his remarks on the subject cannot be accepted as having much value. I must also say at once that I am not writing about any of those diseases often called rheumatism, which are really pains or swellings due to other diseases such as syphilis, gonorrhœa, septic absorptions, or injuries; nor of the various pains in muscles and fasciæ such as lumbago or pleurodynia, nor of the pains due to the various fevers, influenza, dengue, or malaria, and many other pains often called rheumatism. The word rheumatism is now omitted from the nomenclature of diseases.

By rheumatic fever I mean the ordinary typical rheumatic fever, which I need not describe, but which, I would mention, has a special predilection for synovial and serous membranes, and by rheumatoid arthritis I mean the disease defined by Osler as "a chronic disease of the joints, of doubtful etiology, characterised by changes in the cartilages and synovial membranes with periarticular formation of bone and great deformity," in fact, the disease he calls arthritis deformans. The fact to which I wish to draw attention is that there is no rheumatic fever and no rheumatoid arthritis in the Malay Peninsula, and I shall produce some figures which will show that it is extremely probable that neither of these diseases occurs in any part of the tropics. By tropics I mean not merely hot countries, but that part of the world which lies between the north and south latitudes of 23° 28′, and in what I say I am considering only land at or near the sea-level. I mention this because Osler writes that "the two countries with the highest admissions in the British Army per 1000 of strength, Egypt and Canada, oddly enough, have climates the most diverse." But neither of these is a tropical country. Egypt is a hot country, but not tropical.

The following figures[1] show the total in-patients and the number of cases of rheumatic fever and of

	Total in-patients.	Rheumatic fever.	Rheumatoid arthritis.
Perak	31,741	1	Nil.
Selangor	22,889	Nil.	,,
Pahang	4,528	1	,,
Negri Sembilan	12,050	2	,,

[1] Journal of Tropical Medicine, 1912.

rheumatoid arthritis in the Federated Malay States returns for the year 1911.

My attention was first directed to this matter in the post-mortem room, as I was never able to find a heart with rheumatic lesions of the valves. For 18 years I searched for rheumatic hearts and have asked other medical men to find me one, but so far I have not come across a single instance. In a period of this duration a medical officer in Malaya would have about 50,000 in-patients pass through his hands. During my search for rheumatic fever and for rheumatic hearts I have been also on the look-out for chorea, as it is generally considered to be a disease due to the same cause as rheumatic fever, but have found none. I have heard of two cases diagnosed as chorea, but this is so small a number that there is the possibility of errors of diagnosis; and the disease is not certainly always of rheumatic origin, as cases have been reported which followed gonorrhœa and the puerperium.

Rheumatoid arthritis I have also failed to find, and this concurrent absence of both rheumatic fever and rheumatoid arthritis in the Malay Peninsula contrasts so markedly with their concurrent presence in the temperate climates that it has left the impression that there may be a causal connexion between the two diseases.

In addition to my experience in one part of the tropics which I first recorded in 1896,[2] I now refer to the opinion of others.

Major Buchanan, I.M.S., wrote:[3] "Up to the moment we have no reliable statement to justify the belief that rheumatic fever (acute rheumatism) has been met with within the tropics." Unfortunately in mentioning India he did not distinguish between India as a whole and tropical India, which is only about one-third of the peninsula. It is obvious that in the higher tropical latitudes cases may easily have come from the temperate zones, and so might vitiate figures collected in Bombay or Calcutta, which are only just inside the tropics.

Mr. James Cantlie wrote[4]: "Rheumatic fever I have never seen in any hospital in China, India, or Egypt, in either native or European. This may be a faulty observation on my part, but I only state what I observed whilst on tour in India, during which I visited hospitals in Madras, Mudura, Bombay, Quetta, Lahore, Delhi, and Calcutta. In Egypt I never met with a case of acute rheumatism, nor in Hong-Kong nor South China during a nine years' residence." Mr. Cantlie's Hong-Kong experience is of fairly long duration and was in the tropics. Dr. McClosky, of Kuala Lumpur,[5] gave a similar result as the outcome of eight years' experience. Those who stated that they have seen cases of rheumatic fever in India do not state whether they saw them in tropical or non-tropical India.

From the *Journal of Tropical Medicine* (1911 and 1912) and from the Straits Settlements Medical Report I have collected the following figures:—

	Total cases treated.	Rheumatic fever.	Rheumatoid arthritis.
Singapore General Hospital	22,134	Nil.	Nil.
Penang ,, ,,	6,870	,,	6
Province Wellesley Hospital	2,696	,,	Nil.
Labuan	307	,,	,,
Seychelles (Victoria Hospital)	388	,,	,,
Northern Nigeria	Not given	684	,,
Ceylon	78,065	12	,,
Grenada	1,823	Nil.	,,
Gambia (Victoria Hospital)	666	,,	,,
Nyassaland	20,560	2	,,

[2] Indian Medical Gazette, December, 1896.
[3] Journal of Tropical Medicine, December, 1899.
[4] Ibid., October, 1899.
[5] Ibid, January, 1900.

Of these figures, the 684 cases of rheumatic fever of Northern Nigeria are an obvious error of transcribing, for there are no cases of rheumatism, a heading which comes next below rheumatic fever and which in all the reports contains large figures. Only 2 of these cases are recorded as having died, and under "valvular diseases of the heart" there are only 13 cases. The medical report for the year 1910 for Ashanti, Northern Territories, and Gold Coast Colony is somewhat similar. Out of 43,618 cases treated there were 614 cases recorded as rheumatic fever with 1 death. I think that 1 death in 614 cases must throw some doubt on the diagnosis, but these figures may have got misplaced and should probably be placed under the heading rheumatism. In all these places many of the cases were probably diagnosed by native dressers; and native dressers when in a difficulty for a diagnosis are very apt to be satisfied with a name.

In most of these returns there are a few cases given of valvular disease of the heart. Some of these cases are probably the murmurs of dilated hearts, but post-mortem examination fails to find on the valves the vegetations of rheumatic origin. There are a certain number of atheromatous valves, but never have I found the rheumatic heart; and I do not think the atheromatous valve can be confused with the vegetative lesion of rheumatic fever.

I have by me the 1912 medical report of the Straits Settlements, which is a very full report. In Singapore hospitals there were 22,134 cases treated with 2584 deaths, but the words rheumatic fever, rheumatoid arthritis, and chorea do not appear. Under the heading rheumatism there are 63 cases with 1 death. Were these cases true rheumatic fever or did they even include a few cases of rheumatic fever I think there would be more deaths. There were 52 cases of valvular disease of the heart, a number which is suggestive when compared with the number which are found in the hospitals of temperate climates. Atheromatous hearts would easily supply this number, and Singapore is one of the big ports of the world; 409,328 passengers and 130,349 crew were examined in Singapore harbour, and these coming from all over the world might provide a few cases of rheumatic heart if any were found. In the post-mortem room of the pathological department, Singapore, there were performed 1422 necropsies, among which were found 19 cases of aortic chronic endocarditis and 7 cases of mitral chronic endocarditis. If in a post-mortem room which serves a population of 312,000 inhabitants only 7 cases of chronic mitral endocarditis are found, if in a hospital return of 22,134 patients there are no cases given of rheumatic fever, chorea, or rheumatoid arthritis, I think I am justified in my statement that these diseases do not occur in Singapore.

In almost every number of the *Journal of Tropical Medicine* are published the annual returns of some tropical country, and all show the same absence of rheumatic fever and of rheumatoid arthritis. Occasionally a medical man is met with who asserts that he has seen a case of rheumatic fever in the tropics. I have heard of a case diagnosed as rheumatic fever which turned out to be syphilis, and I was shown a supposed case which was undoubtedly a septic joint occurring in a case of dysentery. For the majority of the tropical countries the figures in the returns under these headings are zero, and I contend that in view of the number of cases in which the figure is zero, in view

of my own experience and that of the writers I have quoted, and in view also of the small numbers diagnosed as valvular disease of the heart, the probability that the few cases given are either an error in diagnosis or in the subsequent transcription of the returns is greater than the probability that they are true cases of these diseases. And I further contend that these facts are sufficient to throw doubt on the statement of anyone who claims to have seen one or two cases. In other words, I claim that these diseases do not occur in the tropics.

In contrast with the figures I have given those of Dr. Karl Grassmann[6] are worth attention. He gives the deaths due to the circulatory apparatus at ages 15 to 30 as 7 per cent., and at the ages 30 to 60 years as 14·15 per cent. of all deaths for Germany. This, when compared with the 0·0 per cent. of most tropical countries, or even with 0·26 per cent. of Singapore, is very remarkable.

Without necessarily accepting Poynton and Paine's bacillus as the cause, there are many reasons for considering that rheumatic fever is a specific disease dependent on one particular organism. According to Newsholme rheumatic fever shows great irregularities in its incidence from year to year. Seasons of epidemic prevalence tend to extend over periods of one to three years, with intervals of three, four, or six years. Epidemics vary in intensity. The death-rates are similar to those of some specific diseases; there are seasonal variations. It is more common in the towns than in the country; its greatest incidence is on the young. And I submit that its absence from the tropics is another link in the chain of evidence that it is a specific disease. There is another specific disease, scarlet fever, which does not occur in the tropics, but I know of no non-specific disease which does not occur in the tropics.

There are various theories of the etiology of rheumatoid arthritis:—1. That it is a neurosis. 2. That there is a deficiency of lime salts. 3. That it is due to a disturbance of metabolism. 4. That it is caused by absorption from chronic sores such as those of pyorrhœa alveolaris, or those in the region of the anus. 5. That it is due to insufficient sweating. 6. That it has a relationship to rheumatic fever. 7. That it is a specific disease. Of these the first four are just as likely to occur in the tropics as in the temperate climates, and the fifth is just as likely to be an effect as a cause and is very variable in different people in the tropics. No. 6 of these theories is supported by the geographical distribution. Neither rheumatoid arthritis nor rheumatic fever occurs in the tropics, and both are common in certain parts of the temperate zones.

The chronic absorption theory is very attractive, but absorption from chronic sores usually results in anæmia of a kind which is in no way characteristic of rheumatoid arthritis; and when a joint is enlarged as a sequel to a chronic sore, as in dysentery, an organism is found in the joint, which in no respect resembles the joints of rheumatoid arthritis. Where an inflamed joint is the result of a chronic infection the incidence is often on one joint only which may suppurate.

It is begging the question to label rheumatoid arthritis as fibrositis and to give it and all fibrosites the same etiology. The theory that rheumatoid arthritis is a specific disease is the one which seems the most probable. The symptoms are very definite, especially in the acute cases. Those of one case are as much like those of another as are the symptoms of any of the specific diseases. Two typical cases are almost facsimiles of one another, and the sometimes sudden onset bears in the same direction. But the point on which I rest my claim that it is a specific disease is its geographical distribution. It occurs in one part of the world and not in another; and the most likely reason for this is that the heat of the tropics is inimical to some organisms.

Many parasites are peculiar to hot climates, but many animals and plants can live only in the temperate zones, and just as some organisms are thermophilic so others have a low optimum temperature. I would here refer to the bacillus mycoides, which normally will not grow above 22° C., but which by gradually increasing the temperature can with difficulty be made to grow at a temperature of 37° C. It then, after a few passages through guinea-pigs, loses its flagella, develops a capsule, and produces symptoms in all respects similar to those of anthrax.[7] In the same way the natural optimum temperature of the organism of rheumatoid arthritis may be low and yet it may, with difficulty at first, be capable of living at the body heat; and I go so far as to suggest that it might be best cultivated at very low temperatures.

In this paper I have endeavoured to add to the reasons for believing that rheumatoid arthritis is a specific disease, that it may have a relationship to rheumatic fever or possibly require that disease as an antecedent; and I believe that the knowledge that these two diseases are absent from the tropics may give a clue to their etiology, but especially to the etiology of rheumatoid arthritis. Finally, I must mention that Dr. Leigh Canney[8] writes of Egypt as providing an almost certain cure for rheumatoid arthritis. Egypt is not in the tropics, but in some parts its climate is somewhat similar to that of the tropics, and I suggest that many cases of rheumatoid arthritis would be benefited by a stay in the tropics.

Since writing the above there has appeared in the *Indian Medical Gazette* of January, 1915, the Review of a Year's Medico-legal Work in the Calcutta Morgue (1913). 281 cases were examined. Under the heading of disease of heart and blood-vessels the following figures are given:—

	Endocarditis and endarteritis.	Atheroma.
Aortic valve...	Nil.	44
Mitral valve	,, ...	0
Thoracic aorta	,, ...	45
Pulmonary artery	,, ...	1
Coronary artery	,, ...	1

	Aortic valve.	Mitral valve.	Thoracic aorta, first part.
Stenosis	Nil. ...	Nil. ...	Nil.
Vegetations	,, ...	,, ...	,,
Ulceration	,, ...	,, ...	,,
Aneurysm	,, ...	,, ...	2

Ipoh, Perak, Federated Malay States.

[6] Münchener Medizinische Wochenschrift, Nov. 11th, 1913.

[7] Thiele and Embleton: THE LANCET, Jan. 25th, 1913.

[8] Brit. Med. Jour., Sept. 27th, 1913.

TUBERCULOSIS SCHEME FOR PLYMOUTH.—The sanitary committee of the Plymouth borough council has recommended a tuberculosis scheme for the town, to include the erection of pavilions at Mount Gold Hospital, providing accommodation for 52 patients, and the acquisition of 42 beds at various sanatorium institutions and 4 beds at general hospitals for cases necessitating surgical treatment. The cost of the undertaking will involve an annual expenditure of £8496.

A CASE OF LANDRY'S PARALYSIS.

BY J. S. B. STOPFORD, M.B., CH.B. MANCH.,
LECTURER IN ANATOMY, UNIVERSITY OF MANCHESTER.

THE following case was admitted to the Rochdale Infirmary in August, 1912, under the care of Dr. D. Richmond, honorary medical officer to the hospital, to whom I desire to express my thanks for permission to investigate the pathology of the case and publish the notes.

The subject of this report was a robust, athletic young man, 18 years of age, who had gained considerable repute as a weight-lifter and swimmer, and who had never suffered from any illness since childhood. He was a teetotaler and had never contracted any venereal disease. He had complained of transient attacks of severe pain in the lumbo-sacral region for some seven weeks previous to the onset of the paralysis, which he attributed to stooping at his work in the mill. Some weeks before the onset he had been in camps in the Isle of Man and had there been repeatedly wet through.

History of present illness.—The patient noticed whilst out walking with some friends on Sunday afternoon, August 26th, 1912, that his left leg began to give way. It grew rapidly worse, and he had considerable difficulty in reaching home owing to increasing weakness of both legs. After having tea he attempted to go out again, but only succeeded in getting about 200 yards away when he had to give up. He was assisted home and put to bed. He had a good night and slept well, but awoke to find he was quite unable to move either leg. On pushing them over the side of the bed and attempting to stand up he fell to the ground and had to be lifted into bed. Later in the day he was seen by his doctor, who advised removal to hospital, where he was admitted at 5.30 P.M. (August 27th).

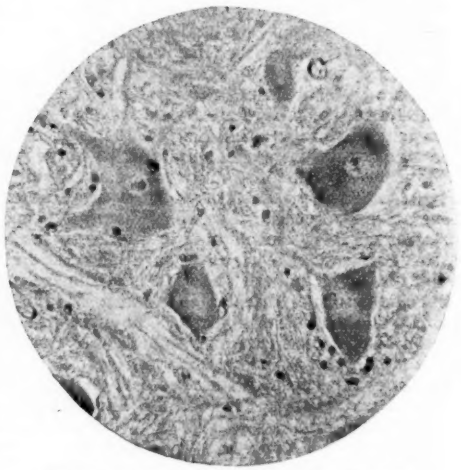
Condition on admission (24 hours after onset).—Besides the paralysis he complained of a tingling sensation in both feet and abdominal pain, somewhat of a "girdle" type, in the region of the lower costal margin. His appearance was that of a healthy muscular young man and his mind was quite clear. Temperature 99° F.; pulse 76 per minute, regular, strong, and good tension. (*a*) *Muscular system.*—Complete flaccid paraplegia—no voluntary movement even at the hip-joint, and apparently no muscle of either leg spared. Slight weakness of the hand-grasp, but no weakness at the shoulder. Practically no abdominal respiratory movements. No tenderness or wasting of the affected muscles. (*b*) *Sensation.*—Tactile sensation (tested by a wisp of cotton-wool) normal except for slight impairment on the soles of the feet. Sensation of pain, heat, and cold normal. (*c*) *Reflexes.*—Superficial and deep reflexes absent except the cremasteric, which gave slight response (abdominal reflexes absent). Organic reflexes normal. No deformity of spine or tenderness at any point. Special senses and cranial nerves normal. Respiratory and cardio-vascular systems and urine normal, although respiration was somewhat feeble. The spleen was not palpable.

Progress of the disease.—August 28th: The hand-grasp on both sides rapidly became weaker. Retention of urine throughout the day, necessitating the use of a catheter at night. (This was thought to be due to the weakness of the abdominal muscles.) August 29th: The difficulty in breathing caused discomfort, and the dyspnœa became more pronounced during the day. He was now unable to move the fingers, and both arms were much weaker. The movements at shoulder- and elbow-joints had become very limited, especially the latter. He passed urine freely without any difficulty. August 30th: Respiration became much embarrassed and purely diaphragmatic in type. There was almost complete paralysis of both arms. No retention of urine. August 31st: The arms had now become flaccid and totally paralysed. Respiration was even more laboured, causing some cyanosis. Dysphagia and slight difficulty in protruding the tongue were experienced during the day. Some paresis of neck muscles seen for the first time, but eye muscles unaffected. At night he complained of "feeling funny in the head," and of "saying things he did not intend to." Sept. 1st: During the early hours of the morning the dyspnœa became steadily worse and he died of asphyxia at 6 A.M.—i.e., 5½ days after onset.

Necropsy.—Unfortunately permission was only granted to examine the spinal cord. This, however, was removed with as much of the spinal nerves as possible. The spinal cord was of firm consistency throughout, and exhibited no macroscopic change except well-marked general vascular engorgement. After hardening, portions were removed from the cervical, mid-dorsal, and lumbar regions, and also pieces of the nerve roots and cauda equina for histological examination.

Histological examination.—After cutting sections of the various regions of the spinal cord and nerves they were stained by the following methods: Nissl's toluidin blue, Marchi, Weigert, Van Gieson, and Bielschowsky.

Spinal cord.—At first sight the changes were not at all obvious, being confined to the motor cells. The majority of these were seen to be swollen and rounded rather than angular, retaining fewer processes, and they stained badly by Nissl's method. (See figure.) There was almost



Section from a case of Landry's paralysis showing cells of anterior cornu.

complete absence of any chromatin granules, the protoplasm appearing homogeneous except in a few instances where some granules remained at the periphery of the cell. In many of the cells no nucleus was to be found, in others the nucleus was ill-defined owing to its inability to retain the stain and was placed excentrically, whilst in a very few the nucleus was only slightly displaced from the centre of the cell, but was swollen and badly stained although its excentric nucleolus was generally deeply stained. These changes were seen in the multipolar cells of the anterior and posterior cornua and Clarke's column, and the changes appeared to be quite as well marked in the cervical as in the lumbar region. There was no proliferation of the neuroglial cells. The vessels in both the grey and white matter were distended with blood, but no hæmorrhages or perivascular infiltration were seen. There was no cellular infiltration of grey matter or meninges as seen in poliomyelitis. Marchi's stain failed to demonstrate any degeneration in the nerve fibres of the cord.

Nerve roots and nerves of cauda equina.—No pathological change could be found in any of the numerous longitudinal and transverse sections of the nerve roots and nerves of the cauda equina which were examined. Staining by the usual methods for demonstrating the presence of micro-organisms failed to reveal any.

Remarks.—Until the pathology of Landry's paralysis is definitely established and universally accepted it appears to be one's duty to make, as far as possible, a full histological examination of the nervous system in all cases of acute ascending paralysis.

Since Landry's [1] paper was written in 1859 improved methods of staining nervous tissues have shown that cases of poliomyelitis and peripheral neuritis can produce a clinical picture practically identical with his case; and we shall never know whether his case was not one of these conditions. Ross and Judson Bury [2] were probably the first to suggest that Landry's paralysis was possibly a type of peripheral neuritis, and since the publication of their treatise many have recorded cases of acute ascending paralysis in which the pathological changes were those of a polyneuritis. Recently Pfeiffer [3] has published a full clinical and pathological report of such a case, and states that "it seems most probable that the pathology of this condition (Landry's paralysis) *per se* is to be looked for in the peripheral nervous system." Many writers have shown that acute poliomyelitis may show symptoms of an "ascending paralysis," and Harbitz and Scheel [4] have stated that many cases published as Landry's paralysis are really severe forms of poliomyelitis.

Nevertheless Buzzard [5] and Williamson [6] maintain that there is a distinct morbid condition worthy of the name Landry's paralysis. Buzzard [5] describes three cases, and in each a histological examination of the nervous system revealed an identical morbid change. The morbid change, and this only a slight one, was confined to the multipolar nerve cells of Clarke's column and the anterior and posterior cornua; there being a pericentral chromatolysis and in some cases excentration of the nucleus. No cellular infiltration of the vessels or white matter occurred, and no change was found in the peripheral nerves except the fine droplets of fat seen after staining by Marchi's method. This latter appearance Buzzard considers of slight importance, since he has seen it in all sorts of toxic conditions irrespective of paralysis.

The condition found in my own case showed an almost identical state of affairs. Although I should have preferred to examine the peripheral nerves more completely, it is probable that some indication of neuritis would have been found by the examination of the nerve roots and cauda equina, if it existed. Similar pathological changes have been reported in cases of acute ascending paralysis by Sheppard and Walker Hall,[7] Courmont and Bonne,[8] and others.

There is still considerable controversy about the pathology of Landry's paralysis, and on reading many of the published cases one is impressed with the chaotic state of the literature concerning this subject. This appears to be due mainly to two factors: in the first place Landry was unable with the methods of staining at his disposal to find any morbid changes, and secondly, the unfortunate alternative name, "acute ascending paralysis," seems to be responsible for the publication of many cases of poliomyelitis and polyneuritis as instances of Landry's paralysis. As we can never ascertain with certainty the actual disease from which Landry's own cases suffered, it would appear more satisfactory only to classify those cases of acute ascending paralysis as Landry's paralysis which do not show histological changes which can be identified as those of poliomyelitis, polyneuritis, &c. If the cases left after such a process of elimination were submitted to a full examination it seems probable that the present confusion would in a short time be remedied, and the pathology of the condition universally accepted. No useful purpose can be served by classing all cases of acute ascending paralysis as Landry's paralysis regardless of the pathological changes, and the sooner the alternative name for Landry's paralysis becomes obsolete the earlier will the point of controversy be decided.

I do not intend to discuss the clinical diagnosis of this disease, as this most difficult task has been considered very fully by other writers.

Summary.—1. We shall never know the precise pathological changes in Landry's cases. 2. Several nervous diseases can produce an acute ascending paralysis. 3. There is good reason to suppose that there is a distinct morbid condition causing a train of symptoms similar to those described by Landry and worthy of the name "Landry's paralysis." 4. There is no advantage in retaining the alternative name "acute ascending paralysis," and the name "Landry's paralysis" should be strictly reserved for a special type of ascending paralysis which does not show the morbid changes of poliomyelitis, polyneuritis, &c.

Manchester.

[1] Landry: Gazette Hebdomadaire de Médecine et de Chirurgie, 1859.
[2] Ross and Judson Bury: Treatise on Peripheral Neuritis.
[3] Pfeiffer, J. A. F.: Brain, 1912–13.
[4] Harbitz and Scheel: Journal of American Medical Association, 1907.
[5] Buzzard, E. F.: Brain, 1907.
[6] Williamson, R. T.: Diseases of the Spinal Cord.
[7] Sheppard and Walker Hall: Review of Neurology and Psychology, 1907.
[8] Courmont and Bonne: Archives de Neurologie, November, 1899.

ON THE GENESIS OF CONSTITUTIONAL GASTROPTOSIS.

BY JOHN J. GRACE, F.R.C.S. ENG.,
CHIEF ASSISTANT IN THE X RAY DEPARTMENT, ST. BARTHOLOMEW'S HOSPITAL;
AND
WALKER OVEREND, M.A., M.D. OXON.,
CHIEF ASSISTANT IN THE X RAY DEPARTMENT, ST. BARTHOLOMEW'S HOSPITAL; LATE PHYSICIAN TO THE PRINCE OF WALES'S HOSPITAL, LONDON, N.

Introduction.

As a preliminary to the discussion of this question we give a brief description of two out of several cases which have come under our observation.

CASE 1.—A female, aged 43 years; tall, thin, complexion rather pale, hair quite white; childhood healthy; in fact, clinical history negative until five or six years ago, when she began to complain of backache. This occurred after a long spell of strenuous nursing with much lifting of patients. A palpable right kidney was found. Increasing uneasiness and discomfort after meals induced her medical attendant to suggest a bismuth meal. There had been no sickness. The measurements of the chest and abdomen were: (1) Minimum circumference of the abdomen between inspiration and respiration, 26 inches; (2) distance from the level of the upper edge of the clavicles and symphysis pubis, 21 inches; (3) distance from the sixth dorsal spine to the level of the iliac crest, 8 inches; and (4) circumference at the level of the nipple (mean), 28·75 inches.

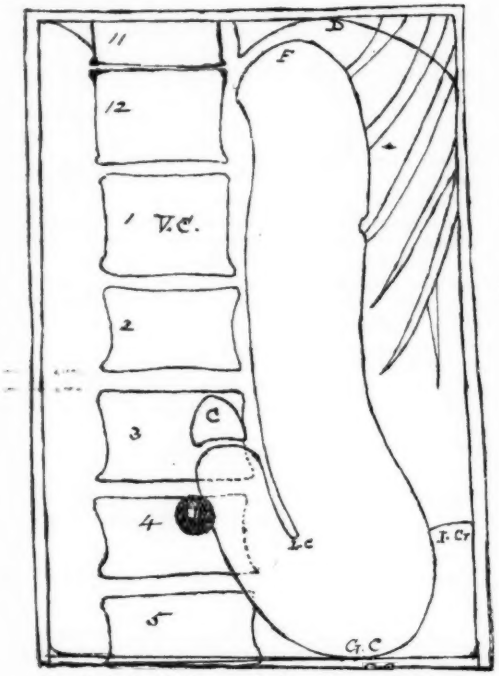
$$\text{First enteroptotic index } \frac{21 \times 100}{26} = 80$$

$$\text{Second } \text{,, } \text{,, } \frac{26}{8} = 3{\cdot}25$$

$$\text{Relations of girth } \frac{28{\cdot}75}{26} = 1{\cdot}1$$

Two ounces of bismuth subcarbonate well mixed with 10 ounces of bread and milk were administered, and a radiogram, with the patient lying on the couch, was taken after 20 minutes. In the diagram the depth of the lesser curvature, even in the recumbent position, lies at the level of the umbilicus and iliac crest, whilst the lower edge of the greater curvature closely approximates the pelvic brim. On the screen, the antrum was small but active; the sinus or

vestibule lay in the ascending loop. The pylorus and cap were low, and the whole stomach resembled a tube of uniform calibre. Later it was seen that the transverse colon skirted the pelvic brim, the hepatic and splenic flexures were little if at all displaced, and the liver dulness was normal. The muscles of the abdominal wall exhibited apparently no relaxation of tone.



CASE 1.—Patient in the recumbent position. D, Diaphragm. F, Fornix. GC, Greater curvature. LC, Lesser curvature. C, Cap of duodenum. VC, Vertebral column. ICr, Crest of ilium. A dark circle indicates the umbilicus.

CASE 2.—The patient, a female, aged 68 years, had suffered from indigestion for two or three years, previous to which she had not experienced any bad health. But about that time her husband became bedridden and required constant attention both day and night for nearly two years. She began to suffer from sickness two months ago; she had never had hæmatemesis. There were much wasting and occult blood in the stools. A test-meal showed the presence of hyperchlorhydria. There was pain in the lower part of the chest passing through to the back one hour after food, which was relieved by vomiting. Liver dulness was normal. There were epigastric tenderness, a palpable right kidney, and constipation. First enteroptotic index = 87; second enteroptotic index = 2·7 (*vide infra*).

In the recumbent position the stomach was cylindrical except in the lower portion, where it was somewhat dilated (secondary atony); the lesser curvature was at the level of the umbilicus, the greater curvature about 3 inches lower. After 24 hours the cæcum and colon were still uniformly filled with the opaque meal; the hepatic flexure was at the level of the crest of the ilium, the transverse colon over 2 inches below the umbilicus, the splenic flexure normal, and the iliac and pelvic colon dilated. For the notes of this case we are indebted to Dr. H. Morley Fletcher.

The Theories of Origin.

In total gastroptosis the stomach, possessing an even diameter, presents the appearance of a long U-shaped tube with the antrum and cap situated at the extremity of the ascending limb. It has no resemblance to the contour of the normal stomach, and has apparently reverted to a primitive type. The fornix is diminutive, the corpus elongated and slender. Its production has been ascribed to the effect of a vertical distension exercised by weight and gravity upon a relaxed and yielding muscular wall. To explain the deviation, sometimes trivial, from the normal time of gastric evacuation, it has been assumed that while peristalsis is normal or actually increased the tone or peristole alone is impaired. The idea is invalidated by the fact that uncomplicated examples exhibit no sign of the transverse dilatation which ensues when a normal stomach becomes atonic. We must therefore reject the opinions of authorities who refer its causation to a weakness of the muscular layers. No doubt atony may follow as the final result of hyperacidity and ulceration, but this loss of tone is secondary.

Since its presence is often associated with a diminished lower thoracic and upper abdominal capacity, it has been maintained that, at the age of puberty, when every organ is striving to assume the size and configuration of the adult form the lessened space existing between neighbouring viscera—liver, kidneys, spleen—by concentric pressure hinders the stomach from expanding in the horizontal direction. As a result it grows in length whilst preserving its volume unchanged. This idea, although attractive, does not survive careful examination.

The diminished upper abdominal cavity is generally due to the peculiarities of the paralytic or expiratory thorax. In the absence of early disease, which may materially modify the normal outlines of the lower thorax, this unusual form must be attributed to a *congenital* or *hereditary* origin. The chest is long and flat; the lowest costal arches closely approach the iliac crest. The line of the ribs forms an acute angle with the sternum, and there may be a floating tenth rib. Below the intermammary region there is, in reality, a general downward displacement of both soft and osseous tissues of the thorax—an altered direction of growth.

An attempt has been made to find a numerical expression for this change. The distance from the level of the upper margin of the clavicle to the symphysis pubis is divided by the minimal circumference of the abdomen and the fraction obtained is multiplied by 100. In women the figure is usually about 75, in men about 66. An index above 80 is often found in palpable right kidney and in the asthenic constitution. A more reliable index may perhaps be obtained by substituting for the denominator the distance between the level of the sixth dorsal spine and that of the crest of the ilium, and placing the minimal circumference of the abdomen as numerator. A normal figure gives 3, in the habitus asthenicus it may fall below 2. The upper part of the chest and the upper lobes of the lung are not really concerned. Also the relation of the intermammary circumference to the minimum abdominal is of interest.

Nevertheless, these figures, although instructive, are not of primary value. There are individuals with extreme indices who do not exhibit the slightest sign of enteroptosis. On the contrary, they may exhibit gastric hypertonus, with high hepatic and splenic flexures, non-palpable kidney, and normal liver dulness. Such a patient gave these numbers:—

(*a*) Clavicle to pubic symphysis... ... ... 22·5 inches.
(*b*) Minimal (mean) abdominal circumference 23·5 ,,
(*c*) Spine of the sixth dorsal to the level of the iliac crest ... ... 11 ,,

First index (thoracico-abdominal) $\frac{22{\cdot}5 \times 100}{23{\cdot}5} = 95$

Second index (mid-thoracico-abdominal) $\frac{23{\cdot}5}{11} = 2{\cdot}1$

Also many cases of gastric ulceration, chronic appendicitis, and habitual constipation possess abnormal indices and do not show a trace of gastroptosis. We have not yet seen the converse—that is, pure general gastroptosis with normal or supranormal indices; its occurrence, however, is indubitable.

The investigations of Professor A. Keith[1] and Professor C. S. Sherrington[2] have shown that the support of the abdominal organs is largely a question of the integrity of reflex arcs and abdominal muscles, the length of visceral bands and mesenteries playing a part of secondary importance only. In the dead subject, when erect, removal of the abdominal muscles induces a degree of ptosis far beyond any displacement observed during life. The tonic contraction of these muscles—recti, obliqui, and transversi—which occurs on standing, is evoked by a reflex the afferent end organs of which lie in the profuse terminations of the peritoneal nerves, including the Pacinian bodies. A failure or weakness of this reflex has been assigned as a cause of Glénard's disease. Keith has also drawn attention to the occurrence of a quasi-inflammatory process in the peritoneum between the third and fifth months of intra-uterine life. This seems to be a necessary expedient for the attainment of the upright position.[3] The result is fixation of the mesenteries to the spine, the ascending colon to the kidney, the back of the cæcum to the abdominal wall, and the terminal ileum to the iliac fossa. One of the objects in view is the prevention of twists and obstructions of the canal.

In the constitutional gastroptosis now under consideration the abdominal muscles are often firm and tense in comparison with their condition in secondary splanchno-ptosis. We cannot, therefore, attribute the descent of the gastric viscus to an acquired laxity of the abdominal wall. The genesis is to be ascribed to the existence of prolonged attachments due to a deficient development of the embryonal adhesive processes already mentioned. This defect will be reinforced by the presence of a narrow upper abdominal opening, by downward displacement of the diaphragm, and by certain osseous changes which take place at the age of puberty. It is, in fact, a partial indication of a general innate or embryonal anomaly, in which an aberrant configuration of the chest, elongated ligamentous bands of the abdominal viscera, prolapse of the stomach, liver, kidneys, terminal ileum, cæcum and colic flexures may one or all participate. Naturally the picture is often incomplete, not only as regards the number of the factors involved, but also in the degree. The relations of the neuromuscular and nodal tissue[4] (myenteric plexus) and of imperfections in the maternal internal secretions to this hereditary error present interesting problems for the clinician and pathologist.

Individuals of this habit, more especially men, often exhibit little or no digestive disturbances. There may be some gastric delay, with a tendency to diffuse habitual constipation associated with a liability, above the average, to impairment of health under conditions of strain. The two cases described in the introduction illustrate the dangers of continuous abdominal stress. This may lead to relaxation of these muscles, increased prolapse, and to gastric difficulties followed by hyperacidity, ulceration, and chronic gastritis. The acquired inter-adjustment of years is dissolved.

[1] Keith: THE LANCET, vol. i., 1903.
[2] Sherrington: The Integrative Action of the Nervous System.
[3] Keith: Human Embryology and Morphology, third edition, p. 267.
[4] Keith: British Journal of Surgery, April, 1915, p. 648.

As long as reasonable care is taken in the way of food, exercise, and mental activity no evil effects may arise, and life may be prolonged even beyond the normal span. A prudent protected mode of living is generally instinctively chosen. In the case of the individual, however, with feeble and unstable nervous organisation, gastric neurasthenia, intestinal stasis, and toxæmia with colitis may supervene and become severe and chronic.

Several secondary causes, contributory to the full evolution of the type, may arise during childhood; these are tuberculosis, thymo-lymphatism with incoördination of the internal secretions, and grave attacks of the infectious fevers. Tuberculosis of the lung, even if old and obsolete, may have increased the erratic development of the chest by implication of the diaphragm; hypertrophy of the thymus may produce premature ossification of the costal cartilages; while the incidence of serious attacks of measles, diphtheria, pertussis, and scarlet fever may induce general relaxation of muscular tone, favour the development of tuberculosis, and may leave indelible marks on the future metabolic processes of the whole organism.

SOME POINTS IN THE CIRCULATORY SYSTEM IN ANKYLOSTOMIASIS:

A NEW EXPLANATION FOR THE MURMURS.

BY ABD EL AZIZ ISMAIL, M.R.C.P. LOND., D.P.H. LOND., D.T.M. & H. CANTAB.

THE hook-worm is responsible for Egyptian chlorosis, which affects from 6 to 15 per cent. of the adult population of the country. Even in a crowded out-patient room variations in the reserve force of the heart are striking. Three stages seem to stand out. Further observations have convinced me that these are quite distinct, and that the majority of patients present one stage or the other.

Description of Typical Cases.

The following is a description of typical cases in the various stages.

Stage I.

Complaint on admission.—Breathlessness, dyspnœa, palpitation on exertion, throbbing of the veins of the neck, and epigastric pulsation.

Physical signs: arteries, heart, and chest.—The apex beat is distinct in the fifth space inside the nipple line, often quite an inch. There are pulsation in the second and third left intercostal spaces, epigastric pulsation, and arterial throbbing in the neck. The deep cardiac dulness is unaffected or slightly diminished. The chest is hyperresonant. The circumference at the fourth interspace is 86–92 cm.; this is an average increase of 8 cm., the difference between full inspiration and expiration being almost one and a half times the normal. No less than 60 per cent. show a systolic murmur at all the orifices, loudest at the apex or base, specially the second to the third left costal cartilage. In this connexion the basal murmurs were more related to the degree of anæmia than the apical, and often in the progress of the case the apical heart sounds became clear while the pulmonary murmur persisted. The second sound at the pulmonary area was accentuated or doubled in four-fifths of the cases.

Whenever the anæmia is under 40 per cent. the *bruit de diable* is almost sure to be present by listening over the jugular bulb. It is the only murmur that has a distinct relation to the degree of anæmia. Pulsation of the jugular often exists, and the rise in the tissues covering the vein will be found to correspond with a distinct *a* wave in the jugular tracing, which is normal. The *v* wave is not abnormally marked. No ventricular type of curve was seen.

At rest the pulse is usually 80–100, with an average of 92 per minute, but some 5 per cent. show 60–72. The systolic blood pressure is 110–130, and the diastolic 70–100 mm. Hg.

State of other organs and the reserve force of the heart.—At this stage the patient is fairly nourished and with a yellow tinge in the conjunctiva. There is no dropsy, no enlarged liver, and the amount of urine, which may be of low specific gravity, is normal. On walking 100 metres the pulse-rate rises 5–12 per minute, and the respirations rise from an average of 22–24. Walking on level ground does not seem exhausting. I have known patients walk for miles with little rest before coming to the hospital out-patient room. The majority were able to attend to their agricultural duties, involving manual labour, till three to seven days before admission. One porter at a railway station was attending to his duties two days previously. On running, however, for 100 yards dyspnœa becomes evident and the respirations rise over 30, the pulse-rate being 110–120 per minute. If the exertion is continued there is a further rise in the pulse-rate up to 130, but the respirations with more exertion may be 60 per minute. The patient then feels giddy and breathless, and is forced to sit or lie down. Some suffer more from the throbbing of the arteries in the neck, which is then extreme, and also from palpitation. In none of this group could a history of cardiac pain or attacks of angina be obtained. Certainly none were observed in the hospital. Going upstairs is more exhausting than running.

Areas of hyperalgesia were looked for in the left mammary region, the left arm, left sterno-mastoid and trapezius, and in none were they present. Some 5 per cent. showed, however, slight tenderness on the ulnar side of the left forearm, of which the patient was unaware previously. No hallucinations or attacks of depression could be made out if pellagra, which so often complicates the disease, be excluded.

This description refers to the majority of cases of this group. But some will show absence of one sign or several but still have to be so grouped, the common link being *the state of the heart and its reserve force*, which is slightly affected.

Stage II.

While the out-patient room is daily crowded with patients in the first stage, cases in the second stage are comparatively rare. When 400 cases had been examined the proportions were: Stage I., 85 per cent.; Stage II., 4 per cent.; and Stage III., 11 per cent.

Complaint on admission.—In addition to the symptoms described under Type I. a history of anginal-like attacks can be obtained. A common story of a patient is this: "On the slightest exertion, especially after meals, a devil takes hold of my throat and chest; I cannot breathe, I imagine my end has approached, but I cannot say the last word of my prayers. This lasts a few minutes." In some cases which I have actually observed during the attack it was followed by an area of tenderness in the left mammary region and the ulnar side of the left arm and forearm.

Physical signs.—The apex beat is now in the nipple line or slightly outside it. The deep cardiac dulness is definitely increased at the fourth interspace. The apex beat is of a heaving nature; the murmurs are more distinct than in Stage I., though of the same character. The chest circumference at the same level measures 96–102 cm. The pulse rate at rest is 105–115 per minute, the respirations are 25–35, and the blood pressure is 140–160 mm. Hg. The sphygmographic tracing shows the characteristics of high-tension pulse.

The skin over the left breast is very sensitive and touching the hairs may be painful, most marked at the second intercostal space. The left arm, especially the radial side, is also tender. There are no such areas at the back nor on touching the muscles in the neck. When the patient is asked to walk 50 to 100 metres the pulse rises to 130 and the respirations to 60, and he has to sit down breathless and giddy. There are no œdema and no enlarged liver; the urine is free of albumin. Attacks of angina were observed in the hospital. They are neither severe nor frequent in any one case, the pain radiating most commonly to the ulnar side of the left forearm.

Stage III.

The patient is pale and dropsical, more commonly a child. He is unable to make any exertion; sometimes sitting or standing up causes breathlessness. The pulse is 120–130 per minute, small and readily compressible; the blood pressure is either 100–110 or 120–140 mm. Hg. The apex beat is outside the nipple line, with an increased area of deep cardiac dulness, but in some no such increase could be made out, and the apex beat, which is hardly felt, lies 1 cm. or more inside the nipple line. Cardiac murmurs are now no longer roaring, and in a third of the cases are absent at the apex and slight at the pulmonary area. A murmur at the jugular bulb was absent in 9 cases out of 20. There are an enlarged liver and œdema of the lungs. The urine may contain albumin, sometimes merely a trace. Cases that showed casts on examination were excluded. Areas of hyperalgesia were present, but not marked as in Type II. No attacks of angina observed, but in 20 per cent. of the cases a history of such could be obtained.

How the Circulation is Carried Out.

Efficient circulation normally depends on—(1) the pressure of the blood in the capillaries; (2) the velocity of the blood in the same; (3) its volume; and (4) its quality.

In anæmia the volume of blood is increased. This volume has to be accommodated in the circulatory system. The arteries, arterioles, and capillaries dilate, evidenced by (1) the size of the radials, (2) capillary pulsation, and (3) the free flow of blood from the pricked finger. With a blood pressure not above the normal the smaller arteries dilate more than the larger ones.

The chest enlarges and the suction action of the thorax is increased. This is more marked in chronic than in acute cases. The condition is one of hypertrophy of the lungs, not emphysema. The breath sounds are not diminished and expiration is not prolonged. The amplitude of respiration is increased. Bronchitis is a very rare complication. Post mortem there are no signs of emphysema. The pulmonary vessels dilate, and the right side of the heart being more extensible than the left is also engorged. Enough evidence is shown in the accentuated or doubled second sound at the pulmonary area.

The output of the left ventricle, judging from its size and the difference between systolic and diastolic blood pressure, is not increased, but the rate of contraction is, and the output per minute must be above the normal. With an arterial pressure almost normal the heart must be overtaxed, but as can be seen clearly from the symptoms there is no depression of tonicity in 8 cases out of 10. The presence of symptoms such as breathlessness, palpitation, &c., on exertion is alone not evidence of dilatation but of diminution in the field of cardiac response, and, in other words, partial exhaustion of the reserve force of the heart. The poor quality of the blood must play a part in the production of these symptoms on exertion.

With the continuance of the anæmia the arterioles begin to contract, possibly due to stimulation of the vaso-motor centre, and Type I., already described, drifts into Stage II. The contraction occurs at first in temporary attacks, later becoming permanent, the blood pressure then rises, and the veins become relaxed though not engorged. Further extra work is thrown on the left ventricle, with marked embarrassment evidenced by areas of hyperalgesia, attacks of angina, and physical signs of cardiac dilatation. The heart is able to maintain an efficient arterial pressure in the recumbent position, and evidence of non-efficiency of the circulation is not apparent in other organs. Stage II. drifts to Stage III., where the arterial pressure can be no longer maintained and severe effects follow. Type II. is rare and occurs in cases exposed to prolonged and especially recurrent infections. The same patient may have been to the

hospital on two or more occasions before. When heart failure supervenes on this type the blood pressure may be kept up above normal for some time, and there is always the previous history of anginal attacks, but when failure follows Stage I. the blood pressure is not raised and there is no such history of cardiac pains. Dropsy is extensive and the hæmoglobin is generally very low (10–15 per cent.). Such cases are more common in children.

Post mortem the two types of hearts—(1) the hypertrophied fatty left ventricle, and (2) the small fatty left ventricle—are too well known.

The Origin of the Mitral Murmurs.

Many hypotheses have been offered. Before discussing a new one let us consider the factors that operate in preventing dilatation of the ventricles: 1. Tonicity of the heart muscle. This is most important. 2. The columnæ carneæ. The first and second classes of these are well-developed in the right ventricle. 3. The valves of the tricuspid orifice are rarely competent to close the opening (John Hunter). Mayo declared that the tricuspid valves never perfectly close the orifice. The pressure in the right ventricle cannot experimentally be much raised as the fluid leaks through the orifice. In the case of the left side the columnæ carneæ are very poorly developed, and the mitral valves are competent to close the orifice.

The left ventricle was shown to be overtaxed in cases of Type I., and with a poor blood-supply it is apt to dilate. This was shown not to be the case. Evidently some mechanism must be in operation if the wall does not yield. What is this safety mechanism? Normally the left ventricle is already partly filled before auricular systole, which is followed by closure of the mitral orifice, and before the ventricle has thoroughly set into systole. The vibration of the valves gives rise to the first sound. In anæmia the ventricle was shown to fill well during diastole and with the onset of systole is probably over-distended. The papillary muscles contract later than the rest of the ventricle, and their object is to prevent retroversion of the valve flaps into the auricle.

My hypothesis is this: The contraction of the papillary muscles if continued further will increase the convexity of the auricular surface of the flaps, which would be supported by the column of blood in the ventricle; further contraction would pull the valve edges into the ventricle, the latter at the same time separating. The chordæ tendineæ from each papillary muscle to both valves tend to prevent undue separation. The origin of the papillary muscles from the anterior and posterior walls, the two contractile walls of the left ventricle, may be a means of regulating their action according to the degree of distension and integrity of the muscle. A chink would be created between the valves—some blood would regurgitate, the overtension in the ventricle released, and possibly a more efficient contraction continued, but a murmur systolic in time results.

Some facts favour this safety-valve hypothesis: 1. The murmur is best heard or only heard in the recumbent position. In this the heart-rate is slowed, the diastolic period increased, the ventricle overfilled, and the mechanism is more needed. With the short diastoles of exercise the murmur often disappears. 2. The murmur resembles one of mitral stenosis in its conduction being localised to the apex or internal to it; a thrill is sometimes felt. Separation of the valves, as was shown, can at best be but slight, and the conditions simulating stenosis are present. The edges of the valves being pulled inside the ventricle the murmur is essentially intraventricular, and the chance of its conduction with the current of blood is slight. The character of the murmur differs from that of stenosis, for the surface of the normal valves over which the blood flows is also different from that in cases of stenosis. 3. The presence of (?) doubled first sound at the mitral is in a quarter of the cases apparently due to vibration of the mitral cusps consequent on overaction of the papillary muscle. When the condition advances a murmur is produced, and a case often passes from one stage to another and back again as conditions get better or worse. 4. Post mortem the papillary muscles taken from cases in the last stages are found to be very fatty, but undoubtedly increased in bulk out of proportion to the hypertrophy of the left ventricle. This is more apparent in the fresh state than in the stained condition. The increase in the size and number of fibres points to previous hypertrophy and past overaction. I had no opportunity of examining these muscles in cases in the earlier stages. 5. A similar murmur is heard in Graves's disease (before actual dilatation has set in), and in overstress of the heart from exercise when there is no sign of increase in the heart chambers. In these and other circumstances conditions obtain similar to those of anæmia which call for the safety-valve mechanism: (1) Over-tension in the left ventricle, either absolute or compared to the weak condition of the muscle; and (2) slight diminution of the reserve force of the heart, the tonus being hardly affected.

As in all protective reflex phenomena, the mechanism comes into play consequent on other sources of stimulation or an irritable nervous system. Hence the functional murmurs in the excitable hearts of the young; but even here over-distension of the left ventricle has been suggested by Mackenzie as possibly playing a part.

As regards the murmurs present in the area of the base, more than one kind have to be distinguished. 1. In rare cases an artery enlarges in the second and third spaces one inch outside the sternum, and pressure on it by the stethoscope causes a murmur. A similar one was described in arterio-sclerosis by Berghe. 2. A meso-systolic murmur roaring with forced expiration and varying with pressure. Pulsation, both systolic and diastolic, is often present in the same area. This is possibly due to a dilated pulmonary artery approaching the chest wall. 3. A murmur that has no relation to the respiration, or at least a very varied one, and may remain long after the apical murmur has disappeared. 4. A murmur having a definite relation to the mitral one and only disappearing with the disappearance of the latter or its conversion into a (?) first sound. I suggest that such a murmur is due to a slight kink that occurs experimentally in the aorta when the papillary muscles forcibly contract, pulling on the valves, as the fibrous ring to which the latter are attached is continuous with that into which the media of the aorta is inserted.

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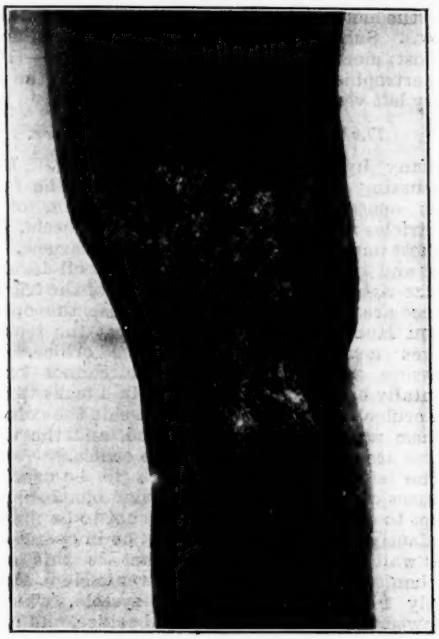
Cairo.

Reproductions of Photographs Illustrating Staff-Surgeon L. F. Cope's Note on a Case of Molluscum Contagiosum Cured by X Rays.

FIG. 1.

Condition of the arm before treatment with X rays.

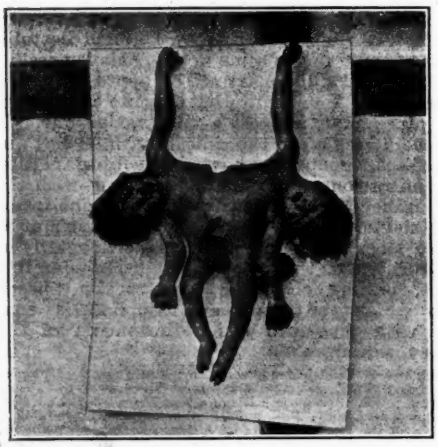
FIG. 2.



Condition fifteen months after treatment.

Reproductions of Photographs Illustrating Mr. J. R. Mackenzie-Jones's Account of a Double Monster.

FIG. 1.



Double monster: Viewed from the front.

FIG. 2.

Viewed from the back.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

A CASE OF MOLLUSCUM CONTAGIOSUM CURED BY X RAYS.[1]

BY LIDBROOKE FRANK COPE, L.S.A.,
STAFF-SURGEON, R.N.

THE patient, a Krooman, was admitted to the Royal Naval Hospital, Simon's Town, with a group of little tumours situated just above the right elbow-joint. (Fig. 1.) Each tumour contained a soft central core from which there was an exudation consisting of serum, a few erythrocytes and cocci, together with the typical hard oval "molluscum bodies." In the occipital region he had a small hard tumour of the keloid type. The history was indefinite, the only information the patient could give being that he had noticed the place on his arm "for some time."

Treatment in the first instance consisted of fomentations with 20-grain doses of potassium iodide thrice daily, without any improvement whatever. After 10 days of this treatment it was decided to try the effect of X rays. The affected part was accordingly exposed to X rays for 10 minutes every other day. The condition at once began to improve, and at the end of the twelfth sitting had completely healed. The second photograph (Fig. 2) was taken 15 months later, and gives satisfactory evidence that the cure is permanent.

The chief points of interest in the case lie in the fact that in the pigmented skin of the negro it is not easy to see zones of inflammation, &c., such as give characteristic appearances to skin lesions in Europeans, and the rapidity with which the condition healed with X rays—a result quite in accord with those obtained by Norman Walker[2] and other dermatologists.

A DOUBLE MONSTER.

BY B. R. CHATTERTON, M.D. DUB., F.R.C.S. IREL.,
LIEUTENANT-COLONEL, I.M.S.

AT my request the following account of a double monster has been written by Mr. J. R. Mackenzie-Jones, I.M.S.

A Telin of village Fularia, P. S. Mirganj, gave birth to a double monster on April 9th, 1914. It was born alive and lived for three days, dying on April 12th.

A post-mortem examination was made on April 13th, when the creature was found to consist of twin fœtuses, united by their trunks and having two heads well covered with hair, four arms, and three legs, two in the front and one at the back with seven toes. The sex was female. There was one anus, near the leg at the back. (See Figs. 1 and 2.)

On opening the body the following were found and noted. Stomach, one and common; liver, common and obliquely extended from right to left; spleen, two; kidneys, two; bladder, one; intestines, common; sex (female), common; hearts, two; aorta, common; and lungs, four.

[1] Published by permission of the Medical Director-General of the Navy.
[2] Medical Annual, 1906, et seq.

Medical Societies.

ROYAL SOCIETY OF MEDICINE.

SECTION FOR THE STUDY OF DISEASE IN CHILDREN.

Localising Brain Symptoms as Early Events in Tuberculous Meningitis.—Demonstration of Cases and Specimens.

A MEETING of this section was held on May 28th, Mr. T. H. KELLOCK, the President, being in the chair.

Dr. C. O. HAWTHORNE read a short paper on Localising Brain Symptoms (Hemiplegia and Hemispasm) as early Events in Tuberculous Meningitis.

Dr. HAWTHORNE also showed a case of Hemiplegia in a girl aged 10 years, with sudden onset but without convulsions, and no evidence of visceral disease. There was a history of good health prior to April 4th. On that day the mother left the child sitting on a chair by the fireside, and when she returned shortly afterwards found her lying on the floor paralysed on the right side and unable to speak plainly. She did not observe anything in the nature of a fit or convulsion. When admitted to the hospital on April 8th the girl had right hemiplegia, was unable to talk plainly, and had a temperature of 103° F. Examination otherwise negative, and cerebro-spinal fluid apparently normal. The temperature fell to normal the next day, and the paralytic condition soon began to improve.

Dr. ERIC PRITCHARD exhibited the following cases: 1. A case of Cystic Lymphangioma in an infant, which he had shown to the section on Jan. 23rd, 1914, as one of persistent "caput succedaneum." Subsequent events proved that this view of its pathology was incorrect, and that the tumour was probably a congenital cystic hygroma or lymphangioma in an unusual situation. At the time the diagnosis was obscured by the fact that the tumour was the presenting part (left shoulder presentation) and that the contents of the cyst, which were drawn off by hypodermic needle, consisted of a blood-stained fluid like blood serum. The tumour had continued to increase in size *pari passu* with the growth of the infant. 2. A case of Polio-encephalomyelitis. The patient, a healthy boy aged 7 years, developed a squint and double vision on April 27th. He was brought to hospital on May 3rd, when he was examined, but no other lesion could be discovered. On May 8th the parents noticed weakness in the right arm and dragging of the right leg. On the 10th he was brought again to the hospital, and then complete palsy of the sixth left nerve was discovered. No nystagmus; discs normal; partial paralysis of the right twelfth nerve. Shoulder girdle: Some weakness of the right side. Arms: No wasting of arm and hand muscles, temperature of both the same; weakness of right arm and hand; grip poor on the right; the right thumb and fifth finger could be opposed only with difficulty; jerks +, more so on left side. Abdomen: Reflexes on left side active, absent in upper half on the right side; no wasting. Legs: No wasting; the right leg and foot colder than the left; weakness of muscles; knee-jerks active on the right, exaggerated on the left; no ankle clonus; ? extensor response on right, flexor on left. On the 14th the boy was admitted to hospital. New lesions were found to be present. Seventh nerve palsy (incomplete type) on the right side; eighth nerve affected; partial deafness; taste normal. Arms: No wasting; grip on the right side weaker than the left; jerks exaggerated on the right, active on the left; total inability to oppose thumb and fifth finger; marked dysdiadokokinesis on the right side. Abdomen: Reflexes absent on the right side. Legs: Weakness greater on the right side; the right colder than the left; knee-jerks, clonus on the right, exaggerated on the left; no ankle clonus; Babinski's sign on the right side, flexor response on the left. No spasticity. Incoördination in walking. No Rombergism. Sensation to light and painful touch on right leg and foot slightly diminished, otherwise normal.

Dr. H. THURSFIELD showed a child with Contraction of Limbs—a case for diagnosis. The child was aged 8 months, with asymmetry of head and chest. The thumbs were flexed into the palms of the hands, and the legs were flexed at the knee-joints and could not be fully extended. There was

talipes of both feet. The patient was the fourth child, born at full term, the labour being natural. Three other children were alive. There had been no miscarriage. The mother had been quite healthy during pregnancy.

Dr. J. D. ROLLESTON showed a case of Ectrodactyly in a girl aged 3 years. The right upper arm and forearm were of the same size as the left, but the right hand was rudimentary. The right metacarpus was 2·5 cm. long by 4 cm. broad, the left 5·5 cm. by 6·5 cm. broad. The phalanges of the right hand were represented by five small tubercles; the thumb tubercle was the largest, being 9 mm. in length, and alone carried a nail, the little finger was 2 mm. long, and the second and third fingers only 1 mm. long. The thumb rudiment and, to a less extent, the other tubercles were movable at will; there was no trace of a scar. The left upper limb and both lower limbs were normal, and there were no other external deformities nor apparent visceral anomalies. Apart from the ectrodactyly the child was well developed. The parents and two other children in the family presented no deformity. The mother attributed the patient's deformity to having seen, during the fourth month of pregnancy, her eldest daughter catch her fingers in a mangle. The girl escaped with slight bruising of the fingers, and the mother did not anticipate the deformity of her child.

Dr. E. G. L. GOFFE showed a case of Syndactyly of the Left Hand with Constriction of the Right Forearm in a girl aged 4 years.

Dr. F. E. BATTEN and Dr. MILDRED A. JUKES showed a case of Amaurotic Family Idiocy (Waren Tay-Sachs Disease) in an infant, aged 11 months, born of Jewish parents at full term, and apparently normal at birth. Weakness of the arms and legs was soon observed, and at the age of three months the mother noticed that the child was blind. The child was the youngest of eight; one sister, similarly affected, died in infancy one year ago. The child shown was a well-nourished child, but feeble; she could not sit up without support. There was no rigidity; all reflexes were normal. The child took no notice of her surroundings, lay quietly in bed, and was not irritable. There was some perception of light, otherwise the child appeared to be blind. On examination of the fundi, the typical white patch was seen on the maculæ with a central, cherry-red spot. The cerebro-spinal fluid was normal. The Wassermann reaction was negative.

Dr. PHILIP FIGDOR exhibited a specimen of Pericarditis in Diphtheria. The patient, a boy aged 3 years, was admitted to hospital for laryngeal diphtheria on Nov. 30th, 1914. Tracheotomy was performed shortly after admission, with instant relief. On Dec. 14th the cardiac rhythm became irregular. On Jan. 11th, 1915, a faint systolic murmur was heard at the apex. On Feb. 27th the cardiac dulness was greatly increased in both directions, and a soft ventricular murmur was heard at the apex, in the axilla and pulmonary area, and there was occasional reduplication of the second sound. On March 1st the murmur was heard in all the areas, but best at the apex. The cardiac dulness was slightly decreased on the right. On March 5th the general condition of the patient was much worse; cyanosis was marked. The cardiac dulness was greatly increased in both directions, and a harsh, double murmur was heard in all the areas. A diagnosis of pericarditis was now made. On the 8th the cardiac dulness was considerably reduced. A mid-diastolic murmur was heard within the apex. By the 15th the cardiac dulness was again greatly enlarged, and death took place on the 23rd. Post mortem the parietal and visceral layers of the pericardium showed recent pericarditis. There were about 10 ounces of serous pericardial fluid. Mitral valve: Edges thickened and eroded. Aortic and pulmonary valves healthy. Left ventricle hypertrophied; right ventricle slightly hypertrophied. Great œdema of pericardium and tissues at root of neck, including the thymus. Lungs almost airless; no tubercle; no evidence of consolidation. Very little fluid in pleural cavity. Slight œdema of mesentery. Gall-bladder œdematous, walls being about one-third of an inch thick.

Dr. F. LANGMEAD showed a case of Hypopituitarism in a boy aged 19 years and 3 months. He was extremely obese, and his general development, mental and physical, resembled that of a boy of 11 or 12 years. The genitals were rudimentary. There was no hair on the face, but some in the suprapubic region. The breasts and general development were of the female character. The voice did not appear to have broken. The amount of urine passed varied between 104 and 260 ounces per diem. There was a corresponding polydipsia. The optic discs and fields of vision were normal. The blood pressure ranged between 110 and 130 mm. Hg. Sugar tolerance had not been tested adequately. The diagnosis was established by a skiagram of the pituitary fossa, which was seen to be minute, the anterior clinoid processes being greatly thickened.

ROYAL ACADEMY OF MEDICINE IN IRELAND.—The Section of Anatomy and Physiology of the Royal Academy of Medicine in Ireland met in Queen's College, Belfast, on May 28th. In the Anatomical Department Mr. P. T. Crymble showed a large number of skiagrams, stereoscopic views, and so on, and the new X ray equipment installed for use in the Department of Anatomy. Professor J. Symington exhibited casts of the cranial wall and of the brain and its membranes in the Museum of Human Anatomy. He also contributed a paper dealing with Some Additional Observations on the Estimation of the Degree of Brain Development from Endocranial Casts, and he gave a description of a new model to illustrate cranio-cerebral topography. In the Physiology Lecture Room Dr. J. A. Milroy read a paper on Some Applications of Electrolytic Reduction. Dr. J. E. McIlwaine read a communication on the Electrocardiographic Method of Estimating the Condition of the Heart Muscle. Dr. J. M. Gibson read a paper on Heart Block produced by Yohimbin and Quebrachin. Professor T. H. Milroy contributed a paper on the Action of Rennin, Professor W. H. Thompson on the Effect of Racemic Arginin on the Excretion of Creatinine and Creatine, and Professor B. J. Collingwood on Some Further Observations on a Urinary Acid Index. On May 29th the members of the section interested in physiology visited the Royal Victoria Hospital, Belfast, where Dr. McIlwaine showed the electrocardiograph and demonstrated its great usefulness in diagnosis and prognosis. This instrument has been in practical use for over a year and a half, and is the only one in Ireland.

NORTH STAFFORDSHIRE MEDICAL SOCIETY.—A meeting of this society was held on May 27th at the North Staffordshire Infirmary, when the following cases and specimens were shown among others. Dr. A. Gill and Dr. A. Hilton John: Transposition of the Viscera in a man aged 23 years.—Dr. S. King Alcock: A specimen of "Anguillula Aceti" in Urine.—Mr. E. E. Young: A man, aged 63, from whom the right half of the tongue was excised for Epithelioma on June 28th, 1912, the glands in the anterior triangle being removed on July 15th, 1912; apparent cure.—Mr. Harold Hartley: (1) Living case, Cancer of Tongue, operated upon; and (2) pathological specimen, Strangulation of the Undescended Testis.—Dr. A. R. Moody: A case of Miners' Nystagmus.—Dr. F. Shufflebotham: A case of Miners' Nystagmus aggravated by Incipient Cataract.—Mr. George A. Carter: Two cases of Nasal and Pharyngeal Syphilis, showing the result obtained by treatment with intravenous injection of "606," followed by intramuscular injections of mercury.—Mr. R. H. Dickson: Cases of Entropion and Trichiasis, showing results of treatment by Transplantation of Buccal Mucous Membrane.

THE annual meeting of the Medico-Psychological Association of Great Britain and Ireland has been fixed for July 22nd, and will be held in London.

BRIDGWATER INFIRMARY.—At a special meeting of the subscribers held recently to consider the serious financial condition of this institution it was stated that an extension of the infirmary was now being carried out at a cost of £6000, towards which sum £4000 had been taken from reserve funds, which meant a loss of £160 per annum in the income. The donations of workpeople had decreased yearly from £275 to about £42. It was eventually decided that in future a charge must be made for all patients—viz., for in-patients 3s. weekly and for out-patients 1s. weekly, patients under 14 years of age to be charged half that amount. Accidents would be admitted free as hitherto.

Reviews and Notices of Books.

Human Physiology.

By Professor LUIGI LUCIANI, Director of the Physiological Institute of the Royal University of Rome. Translated by FRANCES A. WELBY. With a Preface by J. N. LANGLEY, F.R.S., Professor of Physiology in the University of Cambridge. Vol. III.: Muscular and Nervous Systems. Edited by GORDON M. HOLMES, M.D. Dub. London: Macmillan and Co., Limited. 1915. Pp. 667. Price 18*s.* net.

VOL. I. of this work was reviewed in THE LANCET, July 1st, 1911, and Vol. II. on June 7th, 1913. This volume brings the subject matter up to 1913. In 1913 Professor Luciani received a commemorative medal and an album containing the autographs of almost all the world's most eminent physiologists as a mark of his colleagues' esteem and as a tribute to the excellent and brilliant researches carried out by himself during a period of at least four decades. Dr. Gordon Holmes acts as editor in place of Dr. M. Camis, who is unable to act again in this capacity. At the outset let us say that Miss Welby has done her part most efficiently. The translation runs smoothly and does her much credit.

The first three chapters deal with the Muscular Systems. Over 90 pages are devoted to the general physiology of muscle. In this, as in all succeeding chapters, the historical touches in the text are peculiarly valuable. They show the author's erudition, his wide knowledge of the subject, and give that indefinable setting to the actual facts which raise this work to something more than a mere text-book of bald facts and current theories. Moreover, the critical acumen of the author reveals itself in almost every chapter. The matter in the chapter on muscle follows more or less conventional lines, but there are many details and acute observations incorporated which are not found in the ordinary text-books. Since 1871 Luciani has always had his own views as to the relaxation phase of a muscular contraction, skeletal or cardiac. Those interested will find his position elucidated in the text. Rigor mortis is more than a mere coagulation process. In mammals, at least, it is due to loss of oxygenation owing to arrest of the vascular circulation, so that according to Winterstein it is an asphyxiation phenomenon. The little-known ergograph of Treves—little known or at least little used in this country—is fully described. An all too short description of Einthoven's string galvanometer is given. A figure of the instrument and electrocardiograms would have been more illuminating. Langley's "receptive" substances are mentioned in the bibliography, but little is said of them in the text. We heartily welcome the chapter on mechanics of locomotor apparatus (pp. 96–128), a subject all too much neglected and even omitted in some of our English text-books. It is a subject requiring distinct anatomical as well as physiological knowledge. Luciani has made ample use of the work of Braune and Fischer. He was conversant with this work in his Leipsic days. The work of Marey, Carlet, and the French school is also incorporated. Phonation and articulation are the subjects of Chapter III. (pp. 129–174). This chapter has been considerably abridged. It appears that while Grützner used carmine to determine the impression left by the tongue during the articulation of certain sounds, Luciani and Baglioni used cocoa powder.

The remaining part of the text deals with the Nervous System. First, the general physiology of the nervous system is considered (pp. 175–277); its structural elements, the theory of independent neurones and its opposite, that of continuity of neuro-fibrils. Both theories are carefully expounded, exemplified, and criticised; the laws, rate of conduction, and the diphasic character of a nerve impulse, excitation of a nerve, its metabolism and electro-motive phenomena, electrotonus, and allied subjects. Full justice is done to the results obtained by Golgi, Cajal, Nissl, Apáthy, Bethe, and others. The neurone theory, it is stated, "is not based on any conclusive evidence." It is known that a nerve requires a supply of oxygen to keep up its vitality. But no one has yet proved that the oxygen absorbed and the CO_2 given off depend directly upon the state of rest or activity of the nerve. It is because nerves have a low metabolism and specific differentiation that they represent a form of living protoplasm which is endowed with peculiarly high resistance to noxious influences. The motor end-plates lose their conductivity long before the nerve fibres themselves. The most striking demonstration of the vital resistance of nerve is its comparative freedom from fatigue. The discussion on degeneration and regeneration of nerves is interesting, and we are glad to see an excellent exposition of the elaborate and careful work of Perroncito, of Turin (1908), who used Cajal's photographic method. English surgeons who have sutured and "crossed" two different nerves do not seem to be mentioned, though the work of Purpura in the same sphere is given in detail. Nor is much said of the observations of Head, Rivers, and Sherren. Perhaps this is reserved for a later volume.

The fifth chapter deals with spinal cord and nerves (pp. 278–358). Due credit is given to Galen, and the story of Bell, Magendie, Johannes Müller, Panizza, Longet, and Claude Bernard in relation to the functions of the nerve roots is told effectively. Justice is also done to the epoch-marking work of Sherrington on reflexes and allied phenomena and to the compensatory action of the cerebral hemispheres, where there is loss of afferent control in animals with paralysed sensibility. Metamerism, segmental skin-fields and their overlaps, the physiological unit of cutaneous metamerism—the dermatome, myelomeres, and "facilitation" are all fully discussed. The author regards it as far from certain that the psychical functions are localised exclusively in the brain, and he gives his reasons (p. 311). As to the knee-jerk, its reflex nature was clearly brought out by Sciamanna in 1900, although it should be stated that its true reflex character is not universally admitted. In any case it faithfully follows the oscillations in spinal excitability, hence its clinical value as a very delicate physiological indicator of the tone of the nerve centres in general, and those of the cord in particular. The data as to "trophic nerves" are carefully collated and sifted. Independent nerves of this class do not exist—i.e., there are no special trophic nerves and centres entirely distinct from the sensory and motor. A short chapter (VI.) (pp. 359–379) suffices for the sympathetic system. Chapter VII. (pp. 380–418) is devoted to the medulla oblongata and cerebral nerves. The cranial nerves are pretty fully dealt with as befits their importance. Some additional clinical phenomena dependent on lesions of them in disease would have been helpful.

Chapter VIII. deals with the hind brain (pp. 419–485) very fully indeed. This is not to be wondered at, having regard to the important and now classic contributions (1891) which the author himself has made to the physiology of the cerebellum. He does not subscribe to the doctrine of Stefani, that it is an organ for equilibration and orientation of the body in relation to its environment. Much stress is laid on the work of Bolk from a purely morphological point of view, and on that of Van Rynberk from an experimental standpoint. There is no decisive argument for localisation in the cerebellum, though some experiments on monkeys harmonise well with the localisation indicated by Bolk. The mid-brain and thalamencephalon are next discussed (pp. 486–526), and the effects of removal of the cerebral hemispheres in the lower and higher vertebrates. The last chapter (X., pp. 526–633) is consecrated to the fore-brain, its general anatomy, structure of the pallium, history of cerebral localisation, the excitable zones and localisation in dog, monkey, and man, and the physiological analysis of the motor reactions of the cerebral cortex association and other areas, basal ganglia, and speech. As to the histology of the pallium—its myelo-architecture and cyto-architecture—the work of Brodmann is followed rather than that of Campbell.

As to function, Haller (1708–77) regarded the *white* matter—*sensorium commune*—of the brain, not the grey cortex, as the seat of sensation and source of movement. But of all the astounding theories advanced that of the anatomist Sömmering is the most preposterous. In 1796 he localised the seat of the *pneuma psychicon* in the cerebral ventricles. More strange still, he concluded that the *aqua ventriculorum cerebri* is the single medium of nervous activity, the *sensorium commune*, the organ and seat of the soul. He dedicated his treatise to Kant—Kant of Königsberg, of Scottish origin, who in 1781 had published his chief work, "Critique of Pure Reason," and was professor of philosophy in his native town. His lifetime covers the period 1724 to 1804. We seem to be switched back to the middle of the sixteenth century and to Crooke's "Microcosmographia" (1616). In Vicary's "Anatomie of the Bodie of Man," regarding the "Ventricle of Memory," we read: "In the foremost Ventricle are the Five Wits; also the Fancy and the Imagination. In the 2nd or middle Ventricle is Thought. In the 3rd Ventricle is the Memory." Gall and Spurzheim are credited as the founders of the theory of cerebral localisation on the ground that they were the first who brought out the importance of the *grey matter* of the cerebral cortex in general. Gall later lost all critical sense in his eager attempt to solve his phrenological problems.

The alleged "inhibitory" reactions of the fore-brain and organic reactions of cortical origin and epilepsy and the functions of the sensory motor area are next described, analysed, and criticised. The two nuclei of the corpus striatum do not differ in function from those of the sensory motor area of the cortex. The visual area is fully and luminously dealt with. As to the other cortical centres—e.g., auditory—it is more difficult to obtain direct experimental proof. As to the pre-frontal lobes, it appears that their destruction in the dog and ape leaves these animals unaffected in any obvious way in regard to intelligence. "Clinical experience also militates against the theory which ascribes special value in regard to mental functions to the pre-frontal lobes" (p. 621). It is far otherwise with Flechsig's great posterior association areas—parieto-occipital areas. The facts of the morphology, anthropology, experiment, and clinical observations point to the special importance of this region in mental functions and memory itself. The parietal convolutions are extraordinarily well developed in men of high intelligence. Disturbances of speech due to cerebral causes—e.g., aphasia—are carefully analysed in the book, and the conclusion is arrived at that "Marie's cases do not invalidate Broca's theory. If carefully considered, it will be found that they are not irreconcilable with that theory, as shown by Mingazzini" (1908).

We have said enough to show the commanding interest and practical value of modern physiology as set forth in this volume by one of its most masterly exponents. New facts will be added daily, but this full account of the present aspect of physiology itself, as well as of its relation and applications to medicine and surgery, Luciani's "Human Physiology" ranks as a masterly exposition of the present state of a fundamental subject which, besides its importance in relation to medicine, allies itself with the moral sciences. The author recognises that psychical development, even on the ethical side, depends to a large extent upon the somatic substrate. We give a most cordial welcome to this volume, and express the desire and hope that the incubation period of the two volumes yet to appear may be largely diminished, but that will hardly be possible under present conditions. To each chapter is appended a short but useful bibliography. There is a double index—one of subjects and the other of authors. Oddly enough, though Cajal's name occurs in the text, it finds no place in the "Index of Authors."

Materia Medica and Therapeutics.

By J. MITCHELL BRUCE, M.A., LL.D. (Hon.) Aberd., M.D. Lond., F.R.C.P. Lond., and WALTER J. DILLING, M.B., Ch.B. Aberd. Tenth edition. London, New York, Toronto, and Melbourne: Cassell and Company, Limited. 1915. Pp. 645. Price 6*s.* 6*d.* net.

THE authors have taken the opportunity afforded by the new issue of the British Pharmacopœia to make a series of very radical changes in this text-book. The new standard has necessitated numerous omissions and additions, and the whole volume has been largely recast and rewritten. Since the type had to be completely reset, it was possible to alter the arrangement of the material, and the authors have, we think, acted wisely in adopting a pharmacological grouping of the drugs, instead of following the older lines of many former text-books. The new grouping necessarily has some disadvantages, since there are few remedies which do not merit a place in more than one group, and there are some whose claim to the position assigned to them is of the slightest.

An interesting section deals with questions of pharmacy. At the outset the various official preparations are defined and the methods of preparing them are given in useful detail. The directions concerned with practical pharmacy are clearly expressed and, although it is expected that the medical practitioner of the future will not have many opportunities to dispense his own preparations, the information afforded is sufficient to enable him to act on emergency. The few pages devoted to prescription writing are clear and concise.

The section relating to inorganic materia medica maintains the former grouping, based upon chemical composition rather than pharmacological action; thus the alkalies and alkaline earths, the heavy metals and metaloids, the non-metallic elements and acids are treated in separate groups. It is only when we reach the vegetable and animal materia medica and the synthetic preparations that the pharmacological grouping is really adopted; and in this connexion it is interesting to note that the authors retain the term "bitter tonics" to which objection has so frequently been taken by those who wish to restrict the term "tonic" to its purely physiological sense.

So far as the changes necessitated by the British Pharmacopœia are concerned the authors seem to have taken the actual words with a few unimportant omissions. The definitions and the characters are practically identical with those of the British Pharmacopœia. The omissions are mainly concerned with somewhat elaborate tests, which are of importance only to practical pharmacists.

The section devoted to therapeutics has been carefully revised, and many of the dogmatic assertions of former editions have been eliminated in accordance with modern views. A comparison of the information relating to syphilis in this edition with the corresponding paragraph in former editions will sufficiently indicate the care that has been taken to march in step with the times. A few diagrams have been introduced illustrating the action of various remedies on blood pressure, while two diagrams of electro-cardiograms serve to explain this method of investigation. The authors are to be congratulated upon the industry displayed in avoiding deviations from standard authorities.

Defective Children.

By Various Authors. Edited by T. N. KELYNACK, M.D. Vict., M.R.C.P. Lond. London: John Bale, Sons, and Danielsson, Limited. 1915. Pp. 462. Price 7*s.* 6*d.*

The aim of this book is to provide trustworthy and authoritative information with respect to the medical supervision and educational care of the chief classes of defective children of school age, in order that measures may be taken for the rectification, arrest, or amelioration of their disabilities. It is a book which will probably be of great use to school medical officers, but it is addressed also to medical advisers of all institutions concerned with the care of healthy as well as defective children. Most of the chapters are from the pens of recognised authorities, and all of them are valuable contributions to the special subjects with which they deal. There is no attempt made to separate physical from mental defects, probably a wise arrangement, since these two conditions are so closely interdependent. But accordingly chapters on paralytic cripples and tuberculous cripples are wedged in between others on criminal children and defects of vision.

The first chapter is concerned with the correlation of the public health services and administrative questions generally, and is contributed by Dr. E. W. Hope, the medical officer of health for Liverpool. This very important subject scarcely receives its due share of space. Dr. Hope condenses his remarks into ten pages, but some amends for brevity are made in a very excellent bibliography of references at the end of the chapter. This method of supplementing the many curtailments, which are imposed by the limits of the volume, is pursued throughout most of the chapters, and will be highly appreciated by readers requiring fuller information on special points. The chapters on the mentally defective child, idiots and imbeciles, and the epileptic child are respectively supplied by Dr. Hamilton C. Marr, Dr. Douglas William Hunter, and Dr. Andrew Fergus Hewat. The very important chapter on speech defects in childhood and early adolescence is contributed by Dr. L. H. F. Thatcher, and follows in close detail the methods and teaching of Professor J. Wyllie, of Edinburgh. Mr. Hastings Gilford's chapter on defective growth and development gives an interesting account of the rarer forms of abnormal development, including infantilism, ateleiosis, and progeria, but we venture to suggest that a wider view of the general principles concerned in the determination of anomalies of physical development would have been more in line with the general scheme of the work and more serviceable to the majority of readers. Important chapters are those on open-air schools, by Dr. Lewis A. Williams, and on schools for crippled children, by Mr. R. C. Elmslie. The interests of the deaf child are in the safe keeping of Dr. James Kerr Love.

Taking it all round, this is a very valuable addition to the rapidly growing library of the literature of medical school inspection.

Swanzy's Handbook of the Diseases of the Eye and their Treatment.

Edited by LOUIS WERNER, M.B. Dub., F.R.C.S. Irel., Sen. Mod. Univ. Dub. Eleventh edition. London: H. K. Lewis. 1915. Pp. xviii. + 646. Price 12*s.* 6*d.* net.

ANOTHER edition of this well-known text-book has been called for after an interval of three years. Since the last edition was published the original author, Sir Henry Swanzy, has died, and the revision has been carried out by Dr. Louis Werner, who had been associated with the author in preparing several of the previous editions. The present one retains all the characteristic features which have become so familiar.

The restoration of the chapter on the pupil, omitted in the last edition, is an improvement. The trephine operation for glaucoma has been dealt with at greater length, and there has been considerable revision of the sections dealing with vascular diseases of the retina. Other additions and modifications bring the book up to date, and it will doubtless retain its well-earned reputation as a reliable and convenient manual for students. The coloured plates are the same as in the last edition. The use of small print for the rarer conditions is a distinct improvement, but the retention of asterisks to signify subjects of intermediate importance seems unnecessarily elaborate.

MISCELLANEOUS VOLUMES.

Perpetual Peace: A Philosophical Essay. By IMMANUEL KANT, 1795. Translated with Introduction and Notes by M. CAMPBELL SMITH, M.A. With a Preface by Professor LATTA. London: George Allen, and Unwin, Limited. 1915. Pp. 203. Price 2*s.* net.—Although the nations are at war, the reissue of this translation in a cheaper form—it was first published in 1903—is opportune, for, as Kant points out, the mere cessation of hostilities is no guarantee of continued peaceful relations unless a guarantee is given by each individual to his neighbour. With Kant perpetual peace is an ideal to be sought after, and his essay is devoted to the consideration of the best means, founded on mutual interest, of pursuing that ideal. Miss Campbell Smith, who had the help of Mr. David Morrison, M.A., in revising the translation, has accomplished a by no means easy task, and, to

quote the closing words of Professor Latta's preface, "Her work will have its fitting reward if it succeeds in familiarising the English-speaking student of politics with a political essay of enduring value, written by one of the master thinkers of modern times."

The motto "Laugh and the World Laughs with You," which is placed on the title-page of *Round the World in Strange Company*, by NICOLAS EVERITT (London: T. Werner Laurie, Limited. Pp. 283. Price 12*s*. 6*d*. net), exactly expresses the spirit in which Mr. Everitt writes about his travels in the United States and British Columbia. His racy descriptions of men and things are amusing, but his contrast of English and American custom-house methods in favour of the American does not ring wholly true. The book is full of humour and makes excellent reading.——Mr. JEFFERY FARNOL is a sound story-teller. In *The Chronicles of the Imp* (London: Sampson Low, Marston, and Co. 1915. Pp. 219. Price 3*s*. 6*d*. net.) we have a love theme, but the main interest of the romance centres round a boy, who sustains in divers times and places the characters of mediæval heroes, legendary personages, and pirates, with all the intensity of conviction characteristic of the imaginative child. Most of the action takes place in the open air, though the Borrovian element which marks some of Mr. Farnol's other books is absent. To those who can enter with sympathy into the romantic mind of childhood the book will prove delightful, but Mr. Farnol has better work to his credit.

An introduction briefly referring to the characteristics of the early herbalists, followed by a number of curious receipts, has been written by FLORENCE HINE, under the title of *A Chaplet of Herbs* (London: George Routledge and Sons. 1915. Pp. 168. Price 2*s*. 6*d*. net), who evidently enjoys browsing among old herbals. A longer introduction would have been an advantage, but it would be ungenerous to complain when such copious extracts that follow on "old-fashioned lore, gathered some of it from manuscripts which seem to have escaped the eyes of the curious, and the rest from books which have long slipped out of the memory of man," are given. There is an excellent bibliography.

In *Brazil, 1913* (Printed by Messrs. Butler and Tanner, Selwood Press, Frome, England. Pp. 604. Price 7*s*. 6*d*. net). Mr. J. C. OAKENFULL, the compiler, gives a very fair picture of Brazil in regard to its political and commercial position, together with information on its anthropology, ethnography, and history, as well as interesting descriptions of its fauna, flora, and geology. Appendices include a gazetteer, information as to cost of living, and a bibliography. The maps, plans, and illustrations greatly add to the value of this guide to a most important area of South America.

Egyptian (Arabic) Self-taught, by Captain C. A. THIMM, fourth edition, revised and enlarged by Major R. A. MARRIOTT, D.S.O. (London: E. Marlborough and Co. 1914. Pp. 80. Price 2*s*. 6*d*.), is a practical little handbook of colloquial Arabic as spoken in Egypt. It contains vocabularies of words in common every-day use and a selection of useful phrases. Professor Flinders Petrie has revised the proofs. The book should be a useful primer for the army and navy, travellers, missionaries, and traders in that country, which will doubtless be yet more opened up after the war.

While no books can replace the official Medical and Dental Registers, the various unofficial directories, by reason of their classification of names with regard to localities, greatly facilitate reference, and the *Dental Directory, 1915* (London: John Bale, Sons, and Danielsson. Pp. 236. Price 3*s*. 6*d*. net), which is now in its seventh year of issue and has been enlarged, is a most useful addition to works of this kind. Besides alphabetical and topographical lists of registered dentists in the United Kingdom, the Channel Islands, the Isle of Man, the colonies and abroad, information with regard to the L.D.S. curriculum is included, as well as much general information concerning universities, colleges, schools, hospitals, dental societies, and so forth.

JOURNALS AND MAGAZINES.

Quarterly Journal of Medicine. Edited by WILLIAM OSLER, J. ROSE BRADFORD, A. E. GARROD, R. HUTCHISON, H. D. ROLLESTON, and W. HALE WHITE. Vol. VIII., No. 31, April, 1915. Oxford: At the Clarendon Press; London, Edinburgh, New York, Toronto, and Melbourne: Humphrey Milford. Subscription price 25*s*. per annum; single numbers 8*s*. 6*d*. net each.—The contents of this number are: 1. Two Cases of Patency of the Ductus Arteriosus, by T. Wardrop Griffith. An interesting account is given of two cases of this developmental defect, in both of which the condition was recognised during life. One of the patients died from infective endocarditis, and the diagnosis was verified post mortem. In the other patient the signs were such as to suggest that there was some further anomaly of the great vessels, and possibly a developmental error giving rise to cyanosis, a symptom which is not usually met with in uncomplicated cases of patent ductus arteriosus. Dr. Wardrop Griffith discusses the causes and effects of this interesting abnormality. 2. Alterations in Arterial Structure and their Relation to Syphilis, by Hubert M. Turnbull. The normal structure of the arteries, the changes which occur during the growth of the individual, and the functions of the coats are considered, and then the abnormalities of structure are classified as follows: hypertrophies, degenerations, amyloid infiltration, inflammations, arteriosclerosis, aneurysm, and direct rupture. Each one of these changes is then discussed, more especially in regard to its causation and the part played by syphilis in this connexion. 3. Mumps: A Critical Review, by Anthony Feiling. An interesting summary is given of our knowledge in regard to this common infectious disease, together with a critical analysis of recent observations upon its pathology, bacteriology, and complications. Dr. Feiling incorporates some personal observations upon the blood in 42 cases of this disease. He shows that there is a slight increase in the total number of leucocytes, together with a lymphocytosis which is both relative and absolute, that this lymphocytosis is present on the first day of the disease, and persists for at least 14 days. He suggests that this blood change is of diagnostic value in differentiating mumps from other inflammatory swellings of the parotid or submaxillary gland. A bibliography extending to 98 references is given.

Cornhill Magazine.—In the June number of *Cornhill* Mr. Anthony Hope Hawkins contributes some observations in defence of the memory of his kinsman Lord Brampton, and, as in the case of Sir Herbert Stephen's vindicatory article in May, Sir Edward Clarke is given an opportunity to make an immediate, or simultaneous, reply. This, it may be observed, is a convenient plan when anything in the nature of a controversy takes place in a magazine published at monthly intervals. Mr. Hawkins argues that Sir Edward Clarke could have raised the question of Sir Henry Hawkins's judicial conduct in Parliament, and incidentally describes his uncle as a "conscientious, wise and a compassionate judge." We can leave Sir Edward Clarke to assert the difficulty of securing the removal of a judge from the bench for the kind of conduct of which he alleges Sir Henry Hawkins to have been guilty, but with regard to the passage cited it may be suggested that probably the quality of compassion, which the late judge no doubt possessed, overrode those implied by the other two epithets, with the result that he "got a verdict" which was not supported by the evidence. Sir Henry Hawkins was not a man to risk being publicly proved wrong if he could help it, but in the particular instance selected by Sir Edward Clarke he, no doubt, was led by sympathy with the victim to underestimate the weight of the medical evidence called for the defence and of the medical opinion behind it.

MEDICAL SICKNESS, ANNUITY, AND LIFE ASSURANCE SOCIETY.—A meeting of the executive committee took place at the society's offices on May 21st, Dr. F. J. Allan being in the chair. During the first few months of the year the sickness claims were heavy owing to the influenza epidemic, but claims have since fallen to normal. It was reported that since the outbreak of war the society had paid the sum of £250 in claims arising from injuries received by members on active service. The number of the society's members serving in the Royal Army Medical Corps steadily increases, and much satisfaction has been expressed at the treatment accorded them by the society in respect of their sickness and accident benefits. In spite of the adverse conditions experienced among all insurance companies, the society is maintaining its new business. Prospectus and all information will be supplied by the secretary (300, High Holborn, W.C.).

THE GENERAL COUNCIL OF MEDICAL EDUCATION AND REGISTRATION.

TUESDAY, JUNE 1ST.

THE General Council of Medical Education and Registration began its summer session to-day at its offices, 299, Oxford-street, W. Sir DONALD MACALISTER, the President, was in the chair.

New Members.

Sir BERTRAM WINDLE, M.D., took his seat as representative for the National University of Ireland for three years from Dec. 10th, 1914; and Sir ARTHUR CHANCE, F.R.C.S.I., took his as representative of the Royal College of Surgeons in Ireland for one year from Feb. 5th, 1915.

An Apology for Absence.

A letter was read from Dr. Hepburn, in which he intimated that he was unable to attend the Council this session owing to his duties as a medical officer of the Western Command at Cardiff.

President's Address.

Sir DONALD MACALISTER delivered his presidential address. He said:—

My first duty is an agreeable one. I have in your name to welcome back to the Council two former members whose past services are still fresh in our remembrance. Sir Bertram Windle, from the National University of Ireland, takes the place of our late colleague Sir Christopher Nixon. Sir Arthur Chance, from the Royal College of Surgeons in Ireland, resumes his old seat, vacated in February last by Sir Lambert Ormsby on the completion of his term of office.

The Council will also be glad to see in his accustomed place our Registrar, Major King. After strenuous labours with his regiment at the front, Major King was invalided home some months ago. He has now sufficiently recovered from his disablement to be allowed to give us his services as Registrar during the session, pending the decision of the War Office as to his future sphere of military duty. During Major King's absence Mr. Cockington, as Acting Registrar, and the other members of the staff have carried on the work of the office with praiseworthy zeal and efficiency.

I have to record with regret the death, since we last met, of our former colleague, Mr. Thomas Bryant, who retired in 1904, after 13 years of service as Treasurer of the Council.

The stress of the great war is still urgent upon us all. The country's call for service and sacrifice has been heard and answered in every part of the Empire. The response from members of our own profession has been especially prompt and generous. Many thousands of our brethren have freely given themselves and their sons, postponing every other claim to the demands of national duty. Members of the Council are fully sharing both in the service and in the sacrifice. To those of our colleagues who are to-day mourning, in proud sorrow, the loss of gallant and promising sons, we offer the tribute of our heart-felt sympathy. And we deepen our resolve to ensure, by every service within our power, that such sacrifices shall not have been made in vain.

The call for qualified physicians and surgeons to take up duty with the Forces has become more and more insistent with the growth of the new armies. Our professional reserves, at no time large, have been drawn upon to the full. Throughout the kingdom organised efforts are in progress for such a readjustment of civil practice as will liberate all who can possibly be spared for the medical service of the Navy and the Army. In these efforts the Scottish Emergency Committee and local committees of the British Medical Association, with the effective coöperation of members of this Council, have taken a leading part. The services of qualified women have been freely offered and accepted for many of the places that are now vacant at home. Senior students, enrolled in the combatant ranks, have been recalled by the War Office, and directed to complete their curriculum with a view to qualification for the Royal Army Medical Corps. Special qualifying examinations have been held by the licensing bodies for candidates whose curriculum was completed. And from overseas have come large numbers of our colonial colleagues, who are possessed of qualifications registrable in this country, and so are eligible for commissions in our army. By the opportune action of the Belgian Government and of the Privy Council the Executive Committee was enabled to give effect to the application of Part II. of the Medical Act (1886) to Belgium, with the result that about 60 Belgian doctors of medicine have become legally qualified to practise in Britain, and to occupy professional positions in public and other institutions.

From all these sources we have obtained timely and valuable help, but they must if possible be supplemented. If we are to make good the losses in the Army Medical Service we must accumulate larger reserves. The casualty lists, and, I am proud to add, the lists also of rewards for conspicuous gallantry, testify to the magnitude of these losses. We must endeavour to fill the vacant places by men whose training and skill can be guaranteed, and whose devotion is not inferior to that of their fallen comrades. We look with confidence to the medical schools and corporations to aid us in our endeavour to maintain, even in the present emergency, the standards of teaching and of testing which we regard as essential to efficiency.

The inquiries, to which I referred in my address last November, regarding the number of students actually in attendance on courses of medical study at the several schools, have shown that at the end of 1914 there were considerably over 1000 fewer than in 1913. The recall of senior students from active service to resume their professional studies has had a favourable effect on the fifth year, now drawing to a close; but we must expect during the next few years a falling off of some 250 per annum in the number who become qualified as medical practitioners.

In the same address I called attention to the fact that, from certain of the provinces of Canada, able and efficient surgeons were desirous of coming to the aid of the Mother Country, but were hindered by difficulties created by their local registration laws. Encouraged by the reception accorded to my remarks here and in Canada, I ventured to communicate with the various medical authorities concerned, and to point out once more the Imperial bearings of the question of reciprocity. The response has exceeded all my expectations. From Ontario, British Columbia, Saskatchewan, Manitoba, and Alberta have come messages, often by cable, stating that legislation has already been initiated for the removal of existing provincial restrictions; and that the provinces desire that reciprocity with this country may be established at the earliest possible date. When the necessary steps are completed, and I have reason to think that no obstacles need be apprehended on this side of the Atlantic, all the provinces of Canada will have severally entered into reciprocal relations with the United Kingdom. The way will then be open for the application of the Medical Act (1886) to the Dominion as a whole, as it is now open to the Commonwealth of Australia. Thus, by the concurrent action of the separate provinces, the Dominion Medical Act, whose operation has hitherto been restricted so far as Imperial relations are concerned, will assume a more comprehensive character, and the medical federation of the Empire will be at length accomplished. Canada possesses schools of medicine of the highest repute; and we may confidently count on receiving from them a further supply of graduates qualified in all respects for the medical service of the State, and legally entitled to practise in any part of His Majesty's Dominions.

The British Pharmacopœia, 1914, was duly published in accordance with your instructions on Dec. 31st. The first issue of 20,000 copies is nearly exhausted. Steps have been taken for the preparation of a second issue, in which a few typographical faults, noted in the first issue, have been corrected. As you are aware, the Pharmacopœia Committee endeavoured to adapt the work to the general requirements of the British Empire, and at the same time to harmonise its directions with those of the States which were parties to the international agreement of 1906. The reception accorded to the new Pharmacopœia, both in the British Dominions and in foreign countries, encourages us to hope that our efforts have in a large measure been successful. The Government of India has intimated that a special edition, such as was prepared in 1900 for Indian use, will no longer be necessary in that country. The Belgian

Government, notwithstanding its present difficulties, has courteously undertaken the duty of intimating to the signatory powers the publication of the British Pharmacopœia, and the manner in which effect has been given therein to the recommendations of the international agreement.

In India legislation for the better regulation of medical practice, already accomplished as regards certain of the Presidencies, is in course of extension. We have received official intimation of a proposed medical ordinance for the United Provinces; and of new regulations, by the Government of India, under which the educational and professional standards for the subordinate medical department will be considerably improved. This will probably form the subject of a report to the Council from the Examination Committee.

From the English Board of Education a communication has been received, from which it appears that there is now some prospect of the establishment in England of a central authority, charged with the coördination and supervision of secondary school examinations and the inception of a system of leaving certificates. Such a system has long existed in Scotland, to the manifest advantage of secondary education in that country. The Council in 1904 resolved: "That any well-considered plan which would tend to a diminution in the number of examinations in preliminary subjects of education, and to a unification of standard of those which remain, would meet with the hearty approval of the Council." The subsequent experience of the Education Committee and of the Council with reference to the recognition and supervision of preliminary examinations, has not been such as to suggest that a "well-considered plan" of the kind would be other than welcome now. I have referred the Board of Education's circular to the Education Committee in order that you may have its report on the proposals at the present session.

At the instance of the Dental Education and Examination Committee inquiries have been addressed to the dental licensing authorities and dental schools as to the suggested deficiency of registered dentists. The replies received indicate the prevalence of an opinion that the unsatisfactory state of the law concerning unqualified practice has a deterrent effect on candidates, and that the duration and stringency of the present curriculum do not constitute a serious obstacle. The committee will present to you a synopsis of the views expressed by the various authorities, and will report on the questions raised by Dr. Newsholme's motion of Nov. 26th, 1914.

Under the powers conferred by you on the Executive and Office Site Committees, these bodies have made satisfactory progress in the task of providing new and better accommodation for the medical and dental work of the General Council and the English Branch Council. The present site and buildings facing Oxford-street have been sold to advantage. A new site in Hallam-street, near Portland-place and New Cavendish-street, has been secured. Mr. Eustace Frere, A.R.I.B.A., has prepared a design for handsome and commodious buildings, which has met with your approval, and has been accepted for exhibition at the Royal Academy. A contract for the erection of the buildings has been made with Messrs. Chinchen and Co., who have undertaken to complete the work by Nov. 1st, The structure has already reached the first floor, and there is a good prospect that the Council may be able to enter into occupation of it by the end of the year. Much pains have been taken by your committee to ensure that the arrangements made for the disposal of the old building, which we have outgrown, and for the new premises, in which we count on carrying forward our work with greater efficiency and convenience, shall be profitable to the Council and adequate to its needs.

Certain financial adjustments, as between the General Council, the Branch Councils, and the Dental Fund, have been under the consideration of the treasurers and the legal advisers of the Council. You will probably think this a suitable opportunity to define more clearly than heretofore the relations of their accounts in respect of capital and current expenditure. Fortunately the financial position for the last year is a favourable one; for although the expenses of the General Council have been unavoidably increased by certain temporary causes, the income of the four Councils in the aggregate exceeds their total expenses by some £2300. The prospect of a greatly diminished income due to the falling off in registrations during the next four or five years, which we must face as an incident of the war, will make it wise to persevere in effecting economies wherever these are practicable.

I am happy to say that our judicial work at this session promises to be less exacting than usual, and that our sittings need not be prolonged beyond this week. In connexion with the enforcement of the penal provisions of the Medical Acts, our thanks are specially due to the Royal College of Physicians of Edinburgh for its public-spirited action in prosecuting two firms of unqualified persons, who conducted so-called practices in that city to the scandal of the civic authorities and of the profession. The penalties recovered have, by order of the Executive Committee, been remitted to the Royal College as a contribution towards the expenses it has incurred. The College, by undertaking this important service, has demonstrated anew its corporate interest in the safeguarding of the public health.

Appointment of Committees.

The following committees were appointed:—

Executive Committee.—The President, Dr. Norman Moore, Sir Henry Morris, Mr. Tomes, Dr. Langley Browne, Mr. Hodsdon, Dr. Norman Walker, Sir John Moore, and Sir Charles Ball.

Penal Cases Committee.—The President, Dr. Saundby, Mr. Tomes, Dr. Norman Walker, and Dr. Little.

Business Committee.—Dr. Norman Moore (chairman), the President, Dr. Norman Walker, Sir Henry Morris, and Dr. Little.

Pharmacopœia Committee.—The President (chairman), Dr. Norman Moore, Sir Thomas Fraser, Sir George Philipson, Dr. Cash, Dr. Caton, Sir John Moore, Dr. Barrs, and Sir William Whitla.

Finance Committee.—Mr. Tomes (chairman), the President, Mr. Hodsdon, Sir Henry Morris, and Dr. Little.

Dental Committee.—The President (chairman), Sir Henry Morris, Mr. Hodsdon, Mr. Tomes, and Sir Charles Ball.

Dental Education and Examination Committee.—Mr. Tomes (chairman), the President, Dr. Knox, Sir Henry Morris, Sir Arthur Chance, Mr. Hodson, and Sir William Whitla.

Students' Registration Committee.—Dr. Norman Moore (chairman), the President, Dr. Mackay, Dr. Langley Browne, Dr. Norman Walker, Sir William Whitla, and Sir Bertram Windle.

The Finance Committee's Report.

Mr. TOMES submitted the report of the Finance Committee. That report stated that the income of the General and Branch Councils for the year ending Dec. 31st, 1914, was £9850 14*s.* 6*d.* The expenditure was £7550 16*s.* 2*d.* Consequently there was a surplus of £2299 18*s.* 4*d.* The report went on to state that the income of the General Council showed an increase of £67 11*s.* 11*d.* An increased sum of £80 was received for colonial and foreign registration fees, but the interest on deposits at the bank was less. All the branches had increased receipts from registration fees; the English branch receiving £783 10*s.*, the Scottish branch £420 9*s.* 6*d.*, and the Irish branch £189 7*s.* 6*d.* more than in 1913, making a total increase of £1518 3*s.* 2*d.* At one time it was feared that during the next year or two the registrations might fall much below the average owing to the number of senior students who had gone to the war in various capacities, their qualification being therefore delayed. The War Office, however, had made efforts to send back to their studies all fourth and fifth year medical students, and it might therefore be hoped that the decrease would be less than was anticipated. The number of students registered was 1600, which was an increase of 120 over 1913, and compared favourably with the average of 1374 for the years 1911–1913. At the present day medical practitioners were in great demand, and were easily able to procure employment; probably this fact was being more fully recognised by the public.

Mr. TOMES, in commenting on the report, said it was satisfactory and it contained no recommendation to the Council. So far the diminution of income had not been felt. Some extra expenditure had been incurred owing to the meetings of the Executive Committee regarding the steps to be taken in connexion with the recognition of Belgian medical qualifications.

The report was adopted without discussion.

The Recognition of Belgian Qualifications.

The PRESIDENT submitted reports from the Executive Committee in regard to the admission of Belgian medical

and dental practitioners to British registration. The report in regard to the medical practitioners stated that: "Part II. of the Medical Act (1886) having been extended by an Order in Council to the kingdom of Belgium during the continuance of the present war, the committee has considered the conditions under which medical qualifications granted in the kingdom shall be recognised for registration in the Foreign List of the Medical Register of the United Kingdom, and has adopted the following resolution: That so long as the Order in Council of Jan. 7th, 1915, remains in force, any person who produces evidence satisfactory to the Registrar that he has obtained the degree of Doctor of Medicine in the Belgian Universities of Brussels, Ghent, Liége, and Louvain, and is legally authorised to practise medicine, surgery, and midwifery in Belgium; and who satisfies the Registrar as to the other particulars specified in Section 12 of Part II. of the Medical Act, 1886, shall be entitled to be registered in the Foreign List of the Medical Register."

The PRESIDENT said that, as he had already mentioned in his address, between 50 and 60 Belgian medical men had taken advantage of this opportunity to register, and others were coming forward.

The report was formally received.

With regard to Belgian dental practitioners a separate report was submitted. It was in the following terms: "The Executive Committee at its meetings on Jan. 22nd, 1915, and Feb. 22nd, 1915, as a matter of urgency arising out of circumstances connected with the war, instead of remitting the question to the Dental Education and Examination Committee for consideration and report to the General Council in the usual way, considered the question of the recognition of Belgian diplomas in dentistry and dental surgery. The committee at the latter late had before it official information in regard to the course of dental professional study and examination which had been furnished by the Belgian Minister of the Interior, and adopted the following resolution:—

(*a*) That a person who has attained the grade of Candidate in Medicine at one of the four Belgian Universities of Brussels, Ghent, Liége, and Louvain, and has, after pursuing the further course of study prescribed for dental practitioners, passed the Diploma examination held by a Belgian Provincial Medical Commission, shall be entitled to be registered in the Foreign List of the Dentists Register, provided he produces to the General Registrar satisfactory evidence in regard to the particulars set forth in Sections 9 and 10 of the Dentists Act, 1878.

(*b*) That, in view of the urgency of the matter, this resolution (*a*), adopted by the committee on behalf of the Council, become at once operative as an instruction to the Acting Registrar; and that the resolution be reported to the General Council for confirmation at the June session."

The PRESIDENT remarked that the information which the Executive Committee now had was that persons who since 1899 had passed the examination which was now prescribed for dentists, were eminently worthy of recognition.

The report was received and the resolution of the Executive Committee was confirmed.

Dental Cases.

The Council considered the reports of the Dental Committee in regard to certain dental practitioners.

The first case was that of Valleck Cartwright Mallan, who was registered in the Dentists Register on Dec. 6th, 1878, as "in practice on July 22nd, 1878." A previous report of the Dental Committee dealt with the manner in which his practice at 106, Edgware-road, had been conducted.

In their present report to the Council the committee found that the following facts were established by the evidence:—"Since the last hearing the said Valleck Cartwright Mallan has removed the tickets, newspapers, advertising letters from patients, and photographs from the doorway and window of the premises, and he put in a photograph of the premises as they now are. He stated that he has also entirely discontinued advertising his practice by means of circulars, pamphlets, or newspapers, by hand or through the post. The complainants offered no evidence that the said Valleck Cartwright Mallan had not fulfilled the undertaking which he had given to the Council."

The complainants, the British Dental Association, were represented by Mr. R. W. Turner, counsel.

Mr. Mallan attended.

After deliberation the Council decided not to erase Mr. Mallan's name.

The next case was that of George William Hammond.

The Dental Committee reported that: "The said George William Hammond was registered in the Dentists Register on Dec. 31st, 1878, as 'in practice on July 22nd, 1878,' and his address in the Register for the current year is 56, Kennington Causeway, S.E. Mr. Hammond did not attend. The solicitor proved the posting of the notice of inquiry on May 8th, 1915, by registered post to him at 56, Kennington Causeway and to Dental House, Ripon, his previous registered address. In both cases the notice was returned through the dead letter office. There is, in fact, no such place as Kennington Causeway, and Mr. Hammond no doubt meant Newington Causeway, near Kennington. Inquiry at 56, Newington Causeway (a common lodging house) elicited the information that although Mr. Hammond was well known and had stayed at that address he was not staying there then, but would probably be found at Rowton House, Newington Butts, where the notice of inquiry was forwarded with a covering letter by registered post on May 17th, 1915, and has not been returned. The committee find that the following facts were established by the evidence: That on Oct. 10th, 1912, the said George William Hammond was convicted at Ripon of felony, and that he was fined £1 and 7*s.* 6*d.* costs, or one month's imprisonment with hard labour in default. He was received into prison in respect of this conviction on Nov. 25th, 1914, and it was notified to the Registrar on Nov. 27th, 1914. The evidence before the committee consisted of the certified copy of the said conviction and of the due posting of the notice of inquiry on the dates mentioned."

Mr. Hammond did not attend.

After consideration *in camerâ*, the PRESIDENT said: I have to announce that George William Hammond having been proved to have been guilty of the felony alleged against him in the notice of inquiry, the Registrar has been directed to erase his name from the Dentists Register.

The Council adjourned.

WEDNESDAY, JUNE 2ND.

The Council considered charges against medical practitioners during the whole of the sitting.

New Inventions.

COMBINED OPERATION CAP AND MASK.

THE illustration represents a form of combined cap and mask which will be found exceedingly convenient in practice. It is made in one piece, and is adjusted in the following manner. After putting the cap on the head the long tail-piece is passed across the face and fastened by buttons behind. The advantages are:—(1) More comfortable, no dragging on the ears; (2) it is fastened by buttons

and therefore more easily secured; and (3) there is a slit in the cap behind which ensures the cap fitting accurately when the mask is pulled across the face.

The makers are Messrs. Down Bros., Limited, 21 and 23, St. Thomas's-street, London, S.E.

E. J. O'MEARA, F.R.C.S. Eng.,
Major, I.M.S.

Reports and Analytical Records
FROM
THE LANCET LABORATORY.

GLAND PREPARATIONS, VACCINES, AND NUCLEO-PROTEIN TABLETS.

(MESSRS. PARKE, DAVIS, AND CO., BEAK-STREET, REGENT-STREET, LONDON, W.)

CERTAIN of these tablets contain 2½ grains of desiccated anterior lobe of the pituitary body, and others 3 grains of the posterior lobe (infundibular portion). The physiological action of the two lobes being different, it would seem correct to use the tablets independently. The anterior lobe extract has been used in delayed physical and mental development in children of a neurotic tendency, and amongst other maladies, in suppressed menstruation. The posterior lobe extract administered hypodermically or intravenously has been used with most favourable results in uterine inertia and uterine and pulmonary hæmorrhage. Orally its administration has been tried in acromegaly, paralysis agitans, and in certain skin diseases. It is reported that there is no increase in blood pressure when administered by the mouth, though that is the case when it is given hypodermically. The parathyroid tablets contain an equivalent of ⅗ grain of fresh glandular tissue. We have also received specimens respectively of cholera vaccine and a mixed vaccine for coliform infections, both of which are prepared in the vaccine laboratory of St. Mary's Hospital under the direction of Sir Almroth E. Wright. Lastly, we have examined specimens of nucleo-protein compound tablets which present an excellent formula. Each tablet contains 1 grain of calcium glycerophosphate, ½ grain of lecithin, and ¼ grain of nuclein. We had no difficulty in extracting and recognising lecithin. This formula is useful in the treatment of nervous exhaustion and nutritive disorders founded on neuroses.

PROTARGEN.

(MELLIN'S PHARMACY, 48, REGENT-STREET, PICCADILLY CIRCUS, LONDON, W.)

Protargen is an effective substitute for similar silver compounds of foreign origin. It is a light chocolate-coloured powder readily soluble in water. It is a true organic combination of silver in which the silver behaves chemically different from that present in the ordinary metallic salts. It is compatible, for example, with sodium chloride and albumin. It possesses the therapeutic activity of colloid preparations and readily penetrates the mucous membranes. Its use is suggested in gynæcological, ophthalmological, and urological practice.

THE ALLENBURYS CONCENTRATED FOOD PRODUCTS.

(MESSRS. ALLEN AND HANBURYS, LIMITED, 37, LOMBARD STREET, LONDON, E.C.)

Recent additions to the list of concentrated food products now made by this firm are: (1) diet tablets; (2) nutrient lozenges; and (3) meat soup squares. They are all easily portable foods and convenient for the soldier or the sailor or the traveller. The diet tablets are made up of milk solids with wheat and chocolate. They contain, therefore, all classes of food—proteins, fat, and starches. We found that the amount of protein was just 13 per cent. They are obviously useful for tiding over an emergency when substantial diet is not available. The nutrient lozenges consist partly of milk products with wheat to which are added beef extractives. In this case we found that the total proteins amounted to 25·61 per cent. The addition of beef extractives gives them an appetising flavour. These also serve a very useful purpose as an emergency food. The meat soup squares contained 41·63 per cent. of protein. Though not to any large extent soluble, these squares enable a very palatable soup to be made. The presence of meat fibre was confirmed by microscopic examination. These preparations, of course, find a very useful place in times of military campaign.

GRANSALO FOOD.

(MESSRS. S. HENDERSON AND SONS, LIMITED, SLATEFORD-ROAD, EDINBURGH.)

This granular preparation contains all classes of food substance—fat, carbohydrate, nitrogenous materials, and mineral salts. The proteins are derived for the most part from eggs and the carbohydrates from flour. The complete analysis of the preparation gave us the following results: Moisture, 7·80 per cent.; mineral matter, 0·90 per cent.; proteins, 15·43 per cent.; fat, 8·44 per cent.; total sugars, including milk and cane sugar, 34·24 per cent.; and starch, 33·19 per cent. The food in the course of its preparation is cooked, and may be used simply mixed with hot water, milk, or cream without any further treatment. The fat extracted proved to contain lecithin. It is a digestible and nutritious food and attractive in flavour.

UNGUEMOL.

(MESSRS. JOHN BELL, HILLS, AND LUCAS, LIMITED, TOWER BRIDGE-ROAD, LONDON, S.E.)

According to our examination this is a combination of substances which are antagonistic to the activities of vermin. It is free from any harmful ingredient or irritant, while it contains no corrosive or other agent which would spoil clothing. It is a fine light yellow powder and is contained in a canister with perforated top, a lever lid preventing loss of material when the tin is not in use. It contains, amongst other things, a bland oil, sulphur and naphthaline in a fine silica basis. It is intended especially for the eradication of lice on the persons of soldiers in the field.

TUBES OF TURTLE CUP.

(TURTLE CUP, LIMITED, 27, ADDINGTON-SQUARE, CAMBERWELL, LONDON, S.E.)

The idea of packing "turtle cup" in collapsible tubes is an excellent one. The tubes are very convenient in practice, and supply a portable, nourishing, and sustaining soup. The turtle gives the "cup" an attractive flavour, and an appetising soup may easily be prepared in this way. A spoonful or so placed in hot water yields all that is required. Turtle cup has been much appreciated by invalid soldiers and by patients who have little or no appetite for ordinary food. It contains something more than mere stimulating principles; it is a rapid and cheering nutrient.

DONATIONS AND BEQUESTS.—By the will of the late Mr. Thomas Groom Barker, of Eccles and Manchester, the testator left £600 to the Manchester Infirmary; £400 each to the St. Mary's Hospital, Manchester, and the Victoria University; £150 to the Royal School for the Deaf and Dumb, Old Trafford; and £150 to the Cheetham Hospital.—King Edward Hospital, Cardiff, has received a gift of 2000 guineas from Alderman J. H. Mathias, of Porth, Rhondda, for the purpose of endowing two memorial beds.

THE LANCET.

LONDON: SATURDAY, JUNE 5, 1915.

The War and the Supply of Medical Officers.

THE forty-first instalment of the *Times* History of the War, which appeared on Tuesday last, deals with British medical service in the war and takes an all-round look at the medical work which has been done in the field and at home. It does not pretend to be more than a very limited survey, but under the different activities and institutions selected for notice reference is made to most of those subdivisions of an enormous subject which are of essential importance. The position of the Army Medical Service at the time of the outbreak of the war is fairly stated. There is no doubt that we went into the war with a medical service good in personnel, but lacking many things in respect of which urgent demands were soon forthcoming. The moment it was clear that we were to take part as a nation in a vast European land war every member of the medical profession with the slightest experience foresaw that around the Army Medical and Army Medical Territorial Services there would have to be grouped much voluntary assistance. From the beginning of the war that assistance came in freely, and no doubt would have been offered more generally if exact knowledge had been provided as to the needs of the War Office. In the absence of this knowledge it seemed to many civilian medical men that their services were not required, an impression that was confirmed in some places by the rejection of offers of adherence. At first the transformation of various and numerous civilian buildings into war hospitals, some of which are mentioned in the *Times* History of the War, and many of which have been described in our columns, seemed unnecessary, particularly to those who were unable to imagine the developments in store. Everywhere we heard of schools being transformed into hospitals, of buildings being modified for Red Cross or St. John purposes, of country houses being handed over as hospitals and sanatoriums; and while the extent of the land war had not developed only a few people were able to read the signs of the times and to realise that the preparations which had been made would quite soon require to be strongly supplemented. But the various stages of the struggle during the past ten months have enabled us to envisage the situation, and we know that in the grim contest ahead, where all our national agencies and energies must be used with the utmost freedom, the medical profession will be further and further called upon.

Our military authorities think that it is absolutely necessary that we should have in training further large numbers of soldiers to take the place of the heavy depletions which are expected in the future, and of which the casualty lists have given us most dismal proofs in the recent past. More men mean more supplies, more camps, more barracks, more sanitation, and, implicitly, more medical officers, and already these officers have experienced considerable losses. At the summer session of the General Medical Council, which was opened on Tuesday last, the President, Sir DONALD MACALISTER, in a presidential address which we publish elsewhere in full, stated that the call for qualified physicians and surgeons to take up duty with the forces had become more and more insistent with the growth of the new armies, and added that our professional reserves, at no time large, had been drawn upon to the full—unless, we presume, some practical methods of readjustment can be devised. We know that the number of medical men already with the colours is very large, but even if the number remaining behind is in some directions barely adequate to our civil needs the further demands must be met. We are a nation at war. The needs of the army and navy are absolutely paramount. The places of those removed from their civilian work must be supplied by falling back upon every medical man who is unemployed; and those who feel that they are to some extent superfluous in their existing positions, and that they would be able to do more in other directions, must be brought in to civilian work if unable to serve with the forces for any reason. By arrangement of our scientific and administrative labour so that all suspicion of overlapping is done away with, there should be some gain of service; and, in the last event, the dropping of certain developments of public medicine, which though most valuable for the well-being of the country at peace, can for the time being be considered as accessories to the social scheme in time of war, and not as vital necessities, can be effected. No doubt in this way, by a rigid economy of the medical personnel of the country, coupled with some sorting up of that personnel, further civilian medical men can be found for the navy and army; and simultaneously it may be expected that the War Office will turn attention to the work that is being done by those who have already accepted commissions or who are doing part-time service with the forces, and will make sure that no waste is taking place there. If among these officers there is any systematic extravagance in numbers, if many are available for long periods where only few are wanted, this should be rectified at once. If many are doing clerical work whose places could be taken under proper supervision by civilians having no other than a business equipment, we feel that substitutes could be found among laymen who should be as unfitted by various disabilities for actual fighting as they are by lack of qualifications for giving medical help. It is possible that the supply of medical men already

with the colours could be made to go further. The matter is one that has throughout engaged the attention of the War Office, and, of course, the members of a service can be manipulated to numerical advantage in a way that a heterogeneous mass of civilians, having nothing but their professional rank in common, cannot be.

We are foreshadowing what would come very near to mobilisation of the whole of the medical profession, and it may be that both individual justice to the medical officer and great advantage to our army and navy would follow if some such course were taken quickly. But it is unfortunate that this unprecedented demand upon our profession should find us with our ranks abnormally thin. At the end of 1914 there were over 1000 fewer medical students actually attendant on courses of study than in 1913. The recall to the schools of senior students who had volunteered for active service will arrest wastage of our numbers caused by the outbreak of war, and will enable the students in their fifth year of study to qualify in due time. But Sir DONALD MACALISTER has warned the General Medical Council that for several years to come a falling off in the number of qualified men must be expected. On the other hand, the possibility of complete medical reciprocity with Canada is at hand, and when the Medical Act of 1886 applies to the Dominion of Canada as it does already to the Commonwealth of Australia the evils of shortage will be counteracted. The British Medical Association, through a war emergency committee, which has recently been formed, is proposing to obtain a census of doctors as a first step towards judging what further help the medical profession can give, and has issued a form inviting medical men in the metropolitan district to state if they are willing to go on active service, or if they will undertake whole-time service at home or part-time service at home. We need hardly say that such voluntary registration, if it could be made effective, would be preferable in many ways to what is usually understood by mobilisation, for this in the case of a profession like ours presents an enormous amount of difficulty and would inevitably lead to many hardships. But in making a voluntary register this fact remains—the responsibility is placed upon each individual to make up his mind as to the seriousness of the situation, and the different conceptions on this point lead to unfair results.

Sanitary Scavenging.

THE Public Health Department of the Local Government Board have most opportunely published a Return as to scavenging in urban districts in England and Wales which has been compiled from the schedules furnished by the authorities of those districts at the beginning of 1914. Ostensibly the inquiry was undertaken with the view of precaution before the onset of hot weather and had no reference to the war, but the heavy imposition placed upon the efficiency of our sanitary system by refugees and by the great number of troops in every town and village in the country has added a special value and importance to the findings. For, as is pointed out in a circular addressed to medical officers and the administrative bodies concerned, it is especially desirable at the present time, considering this congested state of affairs, and also when there are peculiar dangers arising from the spread of infectious diseases, that our sanitary authorities should do all in their power to prevent the retention of accumulations of refuse in the neighbourhood of dwellings and generally to maintain an efficient service for dealing with house refuse.

The Return should materially help domestic sanitation, for the information and advisory measures which it contains will be valuable in many directions, while in an appendix are given the arrangements at present in force for the storage, collection, and disposal of refuse in each urban district. In a preliminary memorandum the directions in which defective arrangements may prejudice public health are indicated, and how these arrangements may be improved is a further subject of consideration. The Board invite health authorities to deliberate whether in regard to their district certain elementary, though effective, principles are followed. The use of the sanitary bin in connexion with all new houses and buildings is enjoined, and especially the covered model, and it is suggested that in the populated parts of a district the scavenging should be undertaken by the authorities' own staff, who should remove all refuse in properly covered carts at least once a week, especially during hot weather. In places where no destructor is available the removal of refuse should be carried out with every precaution to prevent its causing nuisance and danger to health, and if tips are used these should be as remote as possible from dwellings and the material covered with earth and the tip fenced in. All these are quite simple suggestions, and they should be carefully followed throughout the land. Their application will go a long way towards preserving a clean bill of health during a period in which the beginning and continuation of infectious disease are alike favoured by summer conditions.

It will be readily recognised that as the efficiency of scavenging is increased so will danger from flies diminish, since it is well established that ashpits and refuse depositories are their favourite breeding places. From an ideal point of view house refuse should not be allowed to accumulate at all, and as the art of domestic architecture develops we can imagine that for every household there will be its own destructor. This is not yet practicable, although to some extent such a position is realised when as much as possible of the refuse is destroyed in the kitchen fire. With, however, the increasing use of gas and electricity for cooking purposes the domestic facilities for burning refuse will get smaller and smaller. On grounds of public health fire is the best scavenger of all, but except in large towns the destructor is generally

too expensive a proposition. We still await a destructor which by automatically effecting economies can be brought into service in every community, whether large or small. At present it is only the luxury of large and rich districts, and often then it is a source of nuisance.

Annotations.

"Ne quid nimis."

INDUSTRIAL ACCIDENTS IN AMERICA.

IN the United States of America human life is cheap and industrial accidents frequent. An estimate by Mr. T. J. Riley in the Bulletin of the Department of Health, City of New York, places the number of deaths by such accidents at nearly 35,000 per annum. It is calculated that the total number of both fatal and non-fatal industrial accidents must be about 700,000 a year. On the average, 9 railway employees are killed by accident every day in the United States, and 1 is injured every 11 minutes. Out of every 200 coal-mine employees, 1 is killed by accident yearly. These figures refer to occupied males above 15 years of age, and do not include the women workers; it must be noted that four-fifths of the men thus injured are 40 years of age or under, so that the economic waste due to these accidents is extremely large, the victims being struck down in the prime of life. Among the transport workers, it is said, fatal accidents are about three and a half times as common in the United States as they are in Great Britain. More than half the fatal and non-fatal accidents are due to unguarded or inadequately guarded machinery in motion; the remainder are caused by falling bodies, collapsing buildings, explosives, hot liquids, acids, and steam. These facts indicate the nature of the precautions that should be taken to reduce the excessive number of accidents. Moving machinery must be guarded, lifts must be made fool-proof, automatic mechanisms must take the place of human beings or human interference, and the inspection of scaffoldings, buildings in course of erection, lifts, and the like, must be made effective. In America, it seems, it still costs less to kill a man by accident than to protect him against injury. Mr. Riley advocates the wider recognition of the principle expressed in the terms "employers' liability" or "compensation"; at the present time charitable help still plays an unduly large part in making good the social and economic losses caused by industrial accidents. He points out that there is much room for the improvement of hygiene in the pit, shop, or factory; improved hygiene means lessened incidence of disease, particularly occupational disease. Fatigue, again, whether mental or physical, predisposes to the occurrence of accidents, so that unduly long hours of labour should not be allowed. The worker is to be insured for his own benefit against both accident and disease. Who is to pay for the insurance? In the case of accident, Mr. Riley believes, the industry should bear the whole cost. In the case of illness the conditions are not the same; the work and the conditions of the work are responsible only in part for the sickness, and so the cost of insurance against occupational disease should be borne in part by the industry, in part by the worker. Charitable help for these victims of accident or disease is still requisite, and should be given in adequate amount and intelligently. But first and foremost steps should be taken to bring down the number of accidents and to lessen the incidence of occupational disease; both are altogether too high in America.

THE MEMORIAL TO MADAME DEPAGE.

THE following subscriptions have been received towards a memorial to Madame Depage, the wife of Professor Depage, who was drowned in the wreck of the *Lusitania*, when returning from the United States, where she had gone to collect funds for the Depage hospital at La Panne:—

	£	s.	d.
Sir T. Lauder Brunton, Bart., F.R.S.	10	10	0
Mr. D'Arcy Power	5	5	0
Capt. W. J. Greer, R.A.M.C. (T.)	3	3	0
Professor Sinclair White	2	2	0
Mr. Robert Jones	2	2	0
Lieut.-Col. A. W. Sheen, R.A.M.C. (T.)	1	1	0
Mrs. D'Arcy Power	1	1	0
Mr. W. D. Spanton	0	10	6

All who wish to contribute are requested to send their subscriptions to Mr. D'Arcy Power, 10A, Chandos-street, Cavendish-square, W.

MUMPS.

IN a critical review of this common infectious disease in the *Quarterly Journal of Medicine* (1915, vol. viii., p. 255) Dr. Anthony Feiling brings forward certain observations not very generally known. As regards its causation some valuable and suggestive experiments have been made by Nicolle and Conseille. They were quite unable to find any micro-organisms in the fluid obtained by aspiration of the parotid glands of patients with mumps. But with the fluid so obtained they injected the parotid glands of three monkeys. All three developed, after an incubation period varying from 16 to 26 days, a febrile illness lasting two to seven days, and one suffered from a definite swelling of the left parotid gland. The blood in one animal was noted to show a mononuclear leucocytosis. The same monkey which developed this attack of apparent mumps was subsequently reinoculated, but failed to develop any illness, suggesting that immunity had been conferred by the first inoculation. Dr. M. H. Gordon induced in monkeys, in four out of the ten used, symptoms of severe meningeal irritation and death, following inoculation in sterile saline of a filtrate of saliva from patients suffering from mumps. These experiments suggest that mumps is due to a filterable virus comparable to that of poliomyelitis, small-pox, and typhus fever.[1] The blood changes in mumps are important; there is a relative and absolute increase of the lymphocytes; this is present on the first day of the disease, and persists for 14 days. This is of value for diagnosis. Besides the complication of orchitis, present in 20 to 30 per cent. of cases and coming on during the height of the disease, pancreatitis may occur. Nervous complications also are fairly frequent. Mumps, then, whilst usually not serious, the mortality being only 3 per 1,000,000, may present startling clinical symptoms in some cases, and these offer confirmatory evidence of the generalised infection suggested by the animal experiments.

[1] On a Fatal Illness in Children associated with Acute Interstitial Parotitis, M. H. Gordon, THE LANCET, August 2nd, 1913, p. 275.

REMOVAL OF A SHELL FRAGMENT FROM THE CAVITY OF THE RIGHT VENTRICLE.

AT a meeting of the Académie de Médecine of Paris on May 4th M. Beaussenat reported a most extraordinary case—the survival of a man with his right ventricle pierced by a fragment of shell which lay free in its cavity, and its successful removal by operation. Wounds of the heart have often been successfully sutured, but removal of a foreign body from one of the cavities does not appear to have been even attempted. A sergeant of the 91st Infantry Regiment was wounded at Saint-Hubert, in Argonne, on Oct. 1st, 1914, by a hand grenade which exploded at his feet. He was hit by three projectiles—in the left deltoid region, in the front of the right thigh, and in the chest. The last projectile entered at a point a finger-breadth below and to the left of the point of the xiphoid cartilage. Severe præcordial pain and dyspnœa followed. There were hæmoptysis and abundant hæmorrhage from the epigastric wound, which was arrested by applying a dressing. After remaining 24 hours at a dressing station he was removed to hospital. The hæmoptysis was arrested on the fifth day. A radioscopic examination of the chest was made and the report was: "Shrapnel bullet entirely free on the diaphragm." He was never free from painful dyspnœa on effort and præcordial anguish, especially at night. He was taken to Nantes, where, after several radiographic and radioscopic examinations, the diagnosis was: "Fragment of a ball implanted in the pericardium and following all the movements of the heart." Inspector-General Delorme proposed an operation, which the patient declined. He left hospital on Jan. 26th, 1915, on seven days' leave, in the course of which he presented himself for medical examination at Paris. He complained of a persistent sensation of anguish which had much increased since he had left hospital. He was admitted to Auxiliary Hospital 147 on Feb. 4th. The face was pale and a little anxious. The breathing was short and became very rapid when he stood up, walked, or even spoke. He was careful to walk quietly, to speak slowly, and not to make brusque movements. He was more uncomfortable in the horizontal than in the vertical position, and his nights were particularly bad. He had a tendency to hold his hand over his heart, which was simply excitable without any murmur or other sign, except a kind of thrill at the apex. A radioscopic examination was made by Dr. Jaugeas, who found "a small fragment of a projectile with regular movements of little amplitude, synchronous with the heart beats and not influenced by suspension of respiratory movements, manifestly intrapericardiac." On Feb. 17th Dr. Beaussenat made a transverse incision 13 centimetres long over the left fifth rib, which he resected with its cartilage for a distance of 8 centimetres. He pushed back the pleura and exposed and incised the pericardium; it contained liquid, not tinted, but more abundant than normal. Thinking that the projectile might be arrested in the myocardium, he explored the latter systematically. On palpation of the right ventricle he found that it contained a hard movable body. The heart was luxated out of the pericardium and so maintained by two silk loops passed into the wall of the right ventricle. The projectile was brought in contact with the external border of the ventricle near the apex and held there between the left thumb and fingers. While an assistant exercised traction on the silk threads, so as to strain the ventricular wall, M. Beaussenat carefully incised it between them. A gush of dark blood occurred and was instantly arrested by pressure with the index finger, over which during the diastole was passed a forceps and the projectile was seized and removed. It was a metallic splinter of irregular outline 1½ centimetres long and weighing 1½ grammes. The heart wound was sutured with silk and the pericardial and superficial wounds were closed. For three days there was intense dyspnœa and the pulse was feeble and irregular. A marked rhythm "à trois temps" was heard. Recovery, though interrupted by three attacks of pulmonary embolism, was complete on March 17th. Examination in April with the electrocardioscope by Dr. Josué showed only predominance of the left ventricle.

A NEW TEST FOR URINARY SUGAR.

THE difficulties associated with the performance of the ordinary tests for sugar in the urine, of which Fehling's is by far the most commonly employed, are well known, so that the invention of a new diagnostic reagent is a matter of considerable clinical importance. In the *Biochemical Journal* for March Dr. William Cramer describes a method of employing the reduction of a weakly alkaline solution of mercuric oxide to metallic mercury in the presence of suitable sugars, which he considers to have special advantages as a test. The reagent is prepared by dissolving 0·4 gr. of mercuric oxide, red or yellow, with 6 gr. of potassium iodide in 100 c.c. of water, and adjusting the alkalinity of the solution so that 10 c.c. are neutralised to phenol-phthalein by 2·5 c.c. of decinormal acid. The resulting solution is colourless in the cold and turns slightly yellow on boiling. To test for sugar in urine 3 c.c. of the reagent are heated to boiling; then 0·3 c.c. of urine is added and the mixture again boiled. On removing the test-tube from the flame, the mixture darkens if sugar be present, and a deposit of black metallic mercury gradually settles to the bottom. Not only glucose, but lactose, maltose, xylose, and arabinose give the reaction, while cane sugar does not. The sensitiveness of the test fluid can be varied by increasing or diminishing its degree of alkalinity, and the point fixed, as stated above, corresponds to a degree which gives a faint reaction with normal urine, which is known to contain about 0·1 per cent. of sugar. If the reagent is made more alkaline and thus more sensitive, it may give a precipitate with creatinin and other organic substances. Dr. Cramer finds that the "2·5 standard" solution gives a definite reaction with small amounts of sugar in the urine, which only produce doubtful results when tested with Fehling's fluid. He suggests as an indication of the degree of the reaction the possibility of reading print through the solution when boiled in an ordinary test-tube 30 seconds after this is removed from the flame, a few drops of acetic acid being first added to remove any possible turbidity due to phosphates. Small quantities of sugar can thus be recognised and roughly estimated. Ammoniacal urine must not be used for the mercuric test any more than in performing Fehling's reaction. Possibly for ordinary clinical testing the "2·0 standard" solution, which gives no reaction with normal urine, may seem preferable, but Dr. Cramer considers that there is no reason to ignore the minute amount of sugar normally present, when small variations from this percentage can be readily demonstrated.

THE WHITE MAN'S BURDEN IN WEST AFRICA.

THE gravity of the white man's burden in the tropics is now generally recognised. In few places has this burden in the past been greater than in West Africa, and, indeed, it is not so long ago that one of our British colonies in that region was commonly spoken of as "the white man's grave." In recent years continued and strenuous efforts have been made to remedy the conditions which were deleterious to the health of Europeans and natives in West Africa. These efforts have already given encouraging results by reducing both the sickness and the mortality rates, especially among the officials serving in these colonies. In this connexion Dr. A. E. Horn, of the West African Medical Staff, in a paper which he contributed to THE LANCET of May 18th, 1912, drew attention to the improvement which had then taken place and pointed out that credit for the application of the recognised principles of tropical medicine and hygiene was due to the Colonial Office and also to local administrations. These latter, he showed, had consistently authorised and approved of expenditure on sanitary works such as the drainage of marshes, the carrying out of anti-mosquito campaigns, the demolition and reconstruction of native towns and stations, along with the provision and proper control of wholesome water-supplies, and the like, all of which were calculated to improve the conditions of living, not only for Europeans but also for the African natives themselves, and assist, directly or indirectly, in the economic development of the colony. We have received a copy of the report for 1914,[1] just issued, on the vital statistics of non-native officials in the four West African colonies of the Gambia, Sierra Leone, the Gold Coast, and Nigeria, which together employ a white staff of 2641. Owing to the great European war and the resulting military operations in German Togoland and the Cameroons, the burden placed upon the officials of these British colonies was much heavier than usual. Notwithstanding this, the statistics now published present certain satisfactory features. In the year 1905 the death-rate from all causes in the non-native officials was 28·1 per 1000; but in 1913 the rate had declined to 11·8. The year 1914 was exceptional, and it therefore hardly lends itself for comparison with previous years. A large number of officials were released by the colonial Governments for service with the colours at home; others resigned or otherwise determined their appointments for a similar purpose. Moreover, besides the majority of the West African Frontier Force, a great many civil officers were attached to the forces operating in Togoland and the Cameroons, where, apart from the direct casualties in the field, they were naturally exposed in the circumstances to greater risks of disease and other dangers than if they had remained at their posts in their respective colonies. Further, the depletion of the normal staff threw extra work upon those who were left, and also necessitated the retention of many officers in West Africa for periods considerably in excess of the usual length of tour, with the result that the health of some of them suffered and a proportionately higher number of invalidings ensued. Reckoning all the deaths that occurred among the European officials during 1914, the mortality rate was 19·3 per 1000; but if the casualties, 18 in number, in the military operations in Togoland and the Cameroons are deducted, as also 3 other deaths directly due to these operations, the death-rate for 1914 is reduced to 11·6, which is actually just under that of the previous year. The invaliding rate, in spite of the adverse conditions above indicated, was 36·4 per 1000, as compared with 42·6 in 1913. It appears, then, that notwithstanding the exceptional circumstances of 1914, these West African colonies have continued to maintain the progress which had been previously observed. There are, therefore, reasonable ground for believing that the white man's burden in West Africa is being sensibly lightened year by year by the application of the principles of modern science.

[1] West Africa: Vital Statistics of Non-Native Officials, Returns for 1914, H.M. Stationery Office, price 1½d.

VENEREAL DISEASE IN NORWAY.

VENEREAL disease is notifiable in Norway, and during 1914 just over 2000 cases of gonorrhœa and syphilis were notified in its capital, Christiania, which has a population of about a quarter of a million inhabitants.[1] The notification is made by medical practitioners and hospitals, and over 83 per cent. of those notified were males; over a third of all the notifications were made in the month of December, June being the month with the next largest number of notifications. There were 556 cases of syphilis, and it is noted that the infection was extragenital in 20 of these, 6 males and 14 females, the tonsils or lips being the seat of the infection in 11. There were 38 new cases of congenital syphilis, and it is recorded that a special hospital for the treatment of this condition, with 20 beds, was opened in 1914 by the Oddfellows' Lodge at Christiania. It appears that in only 78 cases was the infection acquired in some other town, a low proportion in a harbour visited by so many seamen as Christiania. In 78 instances evidence as to the source of infection was given sufficiently definite to cause special inquiry to be made, and in 60 of these the inquiry gave a successful result. The law allows punishment up to three years of imprisonment to be given to any person who exposes another to venereal infection while knowing or suspecting that he or she has venereal disease himself or herself; 9 men and 18 women were prosecuted under this law, and 2 of the men and 7 of the women were convicted.

[1] Y. Ustvedt, Tidsskrift for den Norske Laegeforening, Kristiania, 1915.

MEDICAL DEFENCE.

THE annual meeting of the London and Counties Medical Protection Society was held at 32, Cravenstreet, Strand, W.C., on May 26th. Dr. G. A. Heron, the president, was in the chair. The report of the council, which was submitted to the meeting and unanimously agreed to, showed a satisfactory record of work for the year. During 1914 the number of applications from members asking for advice and assistance was 621, as compared with 608 during the year 1913 and 575 in 1912. The majority of cases were dealt with successfully without recourse to legal proceedings, and in cases where litigation was necessary the results were also satisfactory. The expenditure on legal action was somewhat heavy, but there was nevertheless a satisfactory increment of the surplus funds of the society at the end of the year. The report showed that 400 new members joined in 1914. Dr. Heron, in his address from the chair, spoke of the need for closer coöperation among medical men in regard to medical defence, and

alluded to a scheme for amalgamation between the London and Counties Medical Protection Society and the Medical Defence Union, which was considered as far back as 1893 without success. He alluded to the support given by THE LANCET then and later to the idea of a fusion between the two societies in terms which suggest the possibility that the idea may revive.

SCIENCE IN CATALONIA.

OVER the greater part of Spain the language spoken is Castilian, nowadays commonly known to us as Spanish. But not less Spanish are two other tongues equally derived from the vulgar Latin once used in Spain—namely, Portuguese-Galician, employed along the western border of the peninsula, and Catalan, spoken by some 3½ million Spaniards living along its eastern border and in the Balearic Islands. As a language Catalan came into existence in the ninth century, when it was brought into Spain from the south of France, Languedoc, by the returning Spaniards, who had been driven northwards out of their country by the Arab invasion in the second decade of the eighth century. Catalan literature, never very extensive in scope or large in quantity, was at its best in the fifteenth century, and after that period fell into decadence from desuetude; Castilian took the place of the Catalan tongue among the educated, and Catalan fell into the position of a *patois*. But about a hundred years ago a revival of the Catalan language and literature was essayed with no little success, and at the present time the effort is well maintained in both poetry and drama. A further example of the new vitality of Catalan takes the form of a "Biological Society" at Barcelona, which published its first year-book in 1914. During the year this society held eight sessions, at which the members read and discussed 30 papers on medical and pathological subjects exclusively, and one on a matter of palæontology. Seven of the papers deal with the electrocardiograph, and are illustrated with numerous electrocardiograms. J. Marimon discusses the question whether both myxœdema and exophthalmic goitre may not be two manifestations of the same disease, hypothyroidism. R. Carrasco details a number of blood-counts in patients with Basedow's disease, showing that in it there is a deviation to the right in Arneth's neutrophil scheme, together with an increase in the nuclear number. Ll. Sayé finds a similar deviation in the leucocytosis produced in both man and rabbits by artificial pneumothorax. He believes that the establishment of such a pneumothorax produces a mild aseptic inflammation in the collapsed lung, and that this accounts for the leucocytosis, which is polymorphonuclear in man, eosinophil in the rabbit. J. Peyrí gives a contribution to the study of McDonagh's leucocytozoon syphilidis, finding himself not in complete accord with some of McDonagh's interpretations of the phenomena observed. Of other papers in the year-book three are written in Spanish, all the rest are in Catalan. The Biological Society of Barcelona is to be congratulated on its scientific activity.

AMONG the new Knights there are two well-known medical men who have earned the honour by scientific and administrative work in medicine. We congratulate Sir James Mackenzie, the distinguished worker in cardiac problems, and Sir Frederick Needham, the well-known expert in lunacy, upon the official recognition of their excellent work.

SIX MONTHS WITH THE BEARER DIVISION OF A FIELD AMBULANCE AT THE FRONT.

BY S. J. A. H. WALSHE, D.S.O., M.B., CH.B. EDIN.,
CAPTAIN, R.A.M.C.

HAVING been during the first six months of the present war in charge of the Bearer Division of a Field Ambulance at the front, I am tempted to record some of my experiences in the hope that they may be at least interesting, if not perhaps useful, to officers who at a later date may have to undertake similar duty.

In this campaign, owing to modern gun fire, it has generally been found quite impossible for the Bearer Division whilst remaining with its Tent Division to go forward, collect the wounded during or after an engagement, and return with the casualties collected to headquarters that night. The Tent Division must of necessity be some miles behind the firing line to be totally outside the zone of fire. To perform its duties properly the Bearer Division cannot possibly remain so far back, owing to the distance and the time which would be lost in coming up. It must almost invariably be in front of our own guns and take up its position from, say, 500 yards to two miles behind the front trenches. Whilst the particular area held by the infantry brigade or units from which wounded are to be collected will be pointed out to one, the selection of the actual site to be occupied by the Bearer Division may be left to the officer in charge, in which place, as a matter of course, an advanced dressing station will be established.

Selection of Site of Advanced Dressing Station.

The selection of this site requires some consideration. One may make it a rule that a battery in action, a bridge over a canal or river, or a chateau (marked as such on the map) are best avoided, as they are most likely to attract the enemy's fire. Neither should the vicinity of a railway station be occupied owing to its gun range being known. Billeting areas of troops are generally observed by hostile aircraft, and for that reason should be avoided.

The most elaborate and possibly the best laid-out advanced dressing station which I have seen was in a railway station. Every available room and all the offices were commandeered for the purpose. No detail appeared to have been overlooked. There was quite a good operating-room fitted up, also a room where patients were to be kept prior to operation, as well as one to which they were to be transferred when operated on. This dressing station might well have been taken as a model, which, indeed, it would have been had it not from its environment been a still better model of a death trap. Unfortunately, it was in a railway station, which in itself is a danger zone, a canal bridge previously shelled by the Germans was not 40 yards away, the adjoining village was entirely occupied by troops, an armoured train came up daily to the station to fire, and as if to complete the picture there were two railway trucks of high explosive shells not 20 yards from the dressing station itself. I have given this instance to demonstrate that the site of a dressing station is of infinitely greater importance than the particular type of house used for the purpose.

When ordered to form an advanced dressing station it is desirable to find some suitable house easily accessible from the road, with good accommodation for patients and the personnel, and near where horses can be stabled, but if possible at least 400 yards away from a battery, or a bridge, or chateau, and as near to the front trenches as the brigade commander thinks desirable. If the sanitary condition of the place and its water-supply are not all that could be desired, one has got to make the best of what one finds.

It is essential that ambulance wagons should be hidden when not in use by covering them with branches of trees, as in the present campaign the Red Cross painted on the wagons has not secured their protection from shell fire. It is unfortunate, but none the less a fact, that ambulance wagons have been shelled by the enemy from a distance at which he could not possibly have mistaken them for any other transport. I have had the position of my dressing station marked by hostile aircraft having detected the ambulance wagons (a large red cross was painted on the top of them) and was severely shelled almost immediately afterwards. It is a wise precaution to have dug-outs or trenches made quite close, which can be utilised when necessary, and it will occur occasionally that a Bearer Division will be compelled to occupy dug-outs entirely.

Collection of Wounded.

When the number of casualties is small the number of wounded are usually collected by the regimental stretcher bearers and carried to the regimental aid posts, from which places it becomes the duty of the Bearer Division to evacuate them to the Tent Division, or possibly to some clearing station. During and after severe engagements the number of casualties is necessarily large, and the work of collecting the wounded becomes too great for the regimental stretcher bearers. Then the Bearer Division must assist them to get the wounded back from the trenches. For this and other reasons it has been found necessary in the present campaign to place the Bearer Division in communication with the headquarters of the infantry brigade, from which it has to evacuate wounded. Such communication is a matter of much importance, and on the way in which it is maintained will, to a large extent, depend the rapidity with which casualties are collected and evacuated. It may be effected in the following ways. 1. By means of a telephone wire laid from headquarters of the brigade to the advanced dressing station. 2. By a cycle orderly. In either of the foregoing methods the entire evacuation is carried out through the medium of the brigade staff, who send direct to the officer in charge of the Bearer Division information as to the number and disposition of casualties and the time when they consider it best to collect and evacuate them. 3. By means of a "liaison" officer. In this method a mounted officer of the Bearer Division with a cycle orderly is told off to remain with and accompany Brigade Headquarters. His duty is "to keep constant touch with the Officer Commanding the Bearer Division by means of his cycle orderly. He must observe where casualties occur or are collected, their numbers, &c. He must note the ground passed over by the brigade, and must lead the Officer Commanding the Bearer Division to the position of the wounded when suitable occasion occurs." In carrying out these orders the liaison officer must be constantly in touch with the regimental medical officers, and so become acquainted if the casualties are too numerous to be collected by the regimental stretcher bearers, and, if so, he reports how many stretcher squads from the Bearer Division each battalion or other unit will require. He also becomes acquainted with the cases which are most seriously wounded (and these require to be evacuated first), how many cases can sit up when pressed for accommodation in wagons, and, further, the most suitable and safest place for a wagon rendezvous.

All these facts communicated at once to the officer in charge of the Bearer Division bring about an extraordinary saving of time in the evacuation of casualties, when time is often of the utmost importance to the lives of the more seriously wounded. This time-saving, to my mind, makes the liaison officer method infinitely the best of any system with which I am acquainted for the collection and evacuation of wounded.

No matter how anxious a brigade staff may be to give information of the type just mentioned, they cannot do so; it is not their work. It is essentially the work of a medical officer, and if left to a layman (in the medical sense of the word) when casualties are numerous unfortunate mistakes are not unlikely to occur.

I, in compliance with instructions, adopted this method during the entire period of the heavy fighting around Ypres in October and November, 1914, when casualties were numerous. I was fortunate in possessing an efficient and capable liaison officer, whose prompt and accurate information enabled me on many occasions to save hours in the collection and evacuation of wounded. The brigade staff readily expressed their approval of the method. It relieved them of all anxiety about the wounded, and thus gave them more time for matters of even still greater import.

The objection most often raised to this method is that it deprives the Bearer Division of the services of one officer. This to a certain extent is the case, but his services are being utilised instead to the best possible advantage where casualties are most likely to occur. I am not at all at one with those who hold that several officers are required with a Bearer Division; indeed, for the greater part of the time around Ypres, during the most severe engagements, the only officer I had to assist me was my liaison officer, and I am quite satisfied that whilst so employed he gave me an amount of assistance which far excelled any work that he could have done for me had he remained at my dressing station. At that time I also had a most reliable non-commissioned officer to assist me.

Transit of Wounded.

At the outbreak of the war the only means of transport for wounded which Field Ambulances possessed were two-horsed ambulance wagons, ten in number. These wagons went to the advanced dressing station with the Bearer Division. However, since last November motor wagons with practically the same holding capacity as the horse wagons have been in use at the front, and their advantages over the latter are obvious.

It is not possible that motor wagons will entirely replace the older horse wagons, and as far as my experience goes there are sound reasons why they should not do so. In the first place, a horse wagon can travel over old, ill-kept roads or over fields which would be quite impossible for a motor wagon

to do. Secondly, even good roads in France and Belgium are usually exposed, and when at all near the firing line are not safe for any transport during the day; and at night head-lights may not be used. On this account motors are highly untrustworthy at night near the advanced trenches, and to add to their difficulty the roads would probably have several shell holes. Finally, where a large amount of transport passes to and fro at night the most careful chauffeurs or drivers will occasionally get their vehicles into a ditch, and it is a much easier matter to get a horse wagon out of a ditch than it is to get a motor.

A procedure which was found very useful at Ypres was to send the horse ambulance wagons up as near to the regimental aid posts as the conditions would allow, and bring the patients back—about two miles—to a place where they would be transferred to the motor wagons, which would take them to the appointed Tent Division several miles back.

Recently the Field Ambulances of the Second Division have been supplied with wheeled stretchers (the McCormack-Brook pattern). These have proved to be of the greatest use in saving both time and labour in getting casualties unable to walk from the regimental aid posts to the wagon rendezvous when the distance to be traversed is quite impossible for any ambulance wagon. The opinion about their utility is not unanimous, but the persons who dispute the point have not, one would imagine, ever acted as stretcher-bearer for 1500 to 3000 yards. If they had they would think otherwise.

I previously mentioned that the billeting site of a Bearer Division will, as a matter of course, be utilised as a dressing station. It is not suggested that the cases evacuated from the regimental aid posts should ever be taken in there; they are sent straight to the Tent Division. However, many slightly wounded cases who are able to walk will be directed to the advanced dressing station from the aid posts and trenches, but it will come in still more useful as a place to which the medical officer in charge of the brigade of artillery can send his casualties. And here it might be mentioned that during the first day or two of an engagement this medical officer may be quite at a loss to know where he can send his wounded, not being acquainted with the sites of the dressing stations.

The officer in charge of a Bearer Division would materially assist the brigade medical officer were he to send an orderly to the nearest battery and indicate to them for the information of their medical officer where his dressing station is situated.

Casualties must not be allowed to accumulate at the advanced dressing station owing to the danger of shell fire. It is well for the officer in charge to bear in mind that rapidity of evacuation should be his aim rather than medical or surgical treatment, which can be so much better carried out in the Tent Division or hospital to which cases may be evacuated.

A Point in Treatment.

There is one type of case which perhaps may be made an exception to the rule just mentioned. It is outside the scope of this article to touch on treatment. But when one has had on many occasions cases brought into a dressing station, which have bled profusely from a severe shell wound or are suffering from shock, one ventures to hope that an officer in charge of a Bearer Division will be supplied with the means of giving an intravenous saline injection. The patient's condition is usually such that it is only too obvious that nothing can save him except an injection of normal saline solution. I specially mention the intravenous method because a rectal injection would probably not be retained, or if it were, would not be absorbed sufficiently fast. Delay is also the objection to the subcutaneous or intramuscular method.

I am quite aware that this suggestion will be met with the objections that I am likely to cause an early and profuse reactionary hæmorrhage, which is exactly the condition to be avoided, that I cannot take proper aseptic precautions in the field, and that I may possibly bring on pulmonary œdema. Very well; if I am not prepared to take those risks and work on the principle that being forewarned is to a certain extent being forearmed, I default. I have seen more cases than one in which I had no doubt whatever that an intravenous injection of saline solution would have given more than a probability of saving life, and I am not the only person serving at the front who from experience holds the opinion.

Before closing I wish to make it clear that in this article I do not, under any circumstances, mean to address myself to officers of some years' standing who naturally have their own ideas as to how the Bearer Division of a Field Ambulance should be run, which ideas possibly differ from and are preferable to mine. I have written in the hope rather that my experiences, differing as they do in some respects from one's preconceived ideas, may be of some little use or interest to those officers who, not having of necessity had an extensive military training and not having had any previous experience of actual warfare, may find themselves in the near future coming to the front with the new armies and placed in charge of the Bearer Division of a Field Ambulance.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

Early Treatment of Tetanus in Military Hospitals in Time of War.

Dr. Bacri has communicated an interesting paper to the Académie de Médecine, and has insisted on the great importance of early diagnosis of tetanus in wounded patients in the preliminary period of infection, while as yet the patient is not seriously poisoned and while serum injected at this period possesses really curative properties. The following is the method which he has used in his hospital, thanks to which he has had the satisfaction of discovering in time and curing two cases of tetanus which declared themselves in the wards. This method was inspired by the preconceived idea that every wounded patient who enters a military hospital is perhaps infected with tetanus. Every day, morning and evening, the patient should be made to open his mouth, the doctor taking note of the distance between the jaws, and finding out the state of tension which is more or less painful in the angle of the jaw. If in any doubt, he should explore the patellar reflex. The testing of the maxillæ and of the patellar reflex barely occupies a minute. The diagnosis arrived at, inject 40 c.c. of antitetanic

serum every day for four consecutive days. In two cases the cure was assured on the fifth day after the first injection. The patellar reflex became normal on the eighth day. The cure was complete on the twentieth day. The systematic examination established that there exists immediately after the period of incubation, at the beginning of the period of invasion of tetanus, a period of treacherous abeyance during which three symptoms, that are easy to discover, point on the surface to the toxic impregnation of the maxillary axis; these are the lessening of the usual width of opening between the jaws; a painful contraction caused by a slight increase in the opening of them; and the very considerable increase of the patellar reflex. At this initial period of infection the antitetanic serum possesses a marvellous efficacy, and its action is by no means inferior as a specific to antidiphtheritic serum.

Preventive Treatment of Typhoidal Peritonitis.

In cases of typhoid fever during the war peritoneal complications are particularly frequent because of the unusually exhausting conditions to which the men are subjected during their evacuation and also because of the defects in their feeding during the same period. As peritonitis in suffering soldiers is almost always fatal, whether operated on or not, M. Courtellement considers it of paramount importance to attempt to prevent its development. In his opinion a suitable treatment, undertaken at an opportune time—that is to say, during the period which he calls pre-peritonitic—offers very excellent chances of success. According to M. Courtellement, three symptoms at this period reveal peritonitic reaction. These are the distension of the abdomen, vomiting, and abdominal pains. As a rule one symptom only, rarely two, indicates the existence of the pre-peritonitic period. Of the three symptoms the more frequent is the distension of the abdomen. This ought to be taken into account each time that it becomes marked. The vomiting as soon as it is repeated without a plausible cause, in the form of true vomiting or of regurgitations, constitutes a strong indication of peritonitic reaction. As to the pains of the preperitonitic period, they habitually present themselves in the form of intestinal colic; at other times affecting the whole abdomen or of one region, and are spontaneous or at times revealed or exacerbated by the ingestion of liquid. When the peritonitic condition characterised by one of these symptoms has been recognised a special treatment should be commenced without delay; this varies according to whether we are dealing with a slight or a severe case. In slight cases it is sufficient to prescribe immobility on the back. On the abdomen damp tepid compresses may be applied, entirely covering it, squeezed out to get rid of excessive liquid, or else an ice-bag may be used covered with flannel. No milk to be given. In serious cases the treatment requires the same immobility, of course, and prolonged applications of ice on the abdomen. Complete abstention from all drinks, either of the nature of milk or water. The patient is only allowed to suck little fragments of ice if he shows a tendency to vomit, and subcutaneous injections of saline solution, the dose to be one litre per day, 500 c.c. being injected in the morning and 500 c.c. at night. This treatment may be continued on an average three days.

May 31st

NOTES FROM INDIA.

(FROM OUR OWN CORRESPONDENTS.)

Appreciation of Medical Services in the Persian Gulf.

THE Commander-in-Chief has received the following telegram from the General Officer commanding the force at Basra: "I have received from all quarters glowing accounts of the conduct of medical officers, assistant surgeons, sub-assistant surgeons, and the army bearer personnel of the Shaiba force and of the line of communications. In the action they displayed great bravery, while throughout the strenuous and unremitting labour of the last six days and nights their devotion to duty has evoked universal praise. Including those of the enemy, over 1100 wounded have been attended to and evacuated to the general hospital at the base under conditions of unusual difficulty and strain on the medical personnel, who have nobly done their duty."

Irrigation in the Central Provinces.

The Central Provinces are beginning to benefit from the irrigation works undertaken of late years. As Sir William Meyer said in his speech in introducing the annual financial statement, the Mahanadi Canal has begun to furnish water for irrigation, this being the first canal system constructed in those provinces. Good progress has also been made on the Waiganga canal and the Tendula reservoir. As in 1915-16 18 lakhs are to be spent on the Mahanadi project and nearly 10 lakhs on the other, the rate of construction will be fully maintained. A few years hence the Central Provinces will have quite a large area under irrigation from canals as distinct from that served by tanks, which hitherto have been the only means of conserving water for the land.

Mysore Sub-Assistant Surgeons.

The Mysore Government is contemplating the opening of a new branch for sub-assistant surgeons in its service. It is understood that a number of sub-assistant surgeons are to be specially trained every year in malarial field work and the causation and prevention of malaria.

Deaths from Snakes and Wild Animals in Assam.

The number of persons killed by wild animals and snakes in Assam during the year 1914 is reported to have been 126 and 150 respectively, as compared with 102 and 167 in the preceding year. Tigers were mainly responsible for the increase in the number of persons killed by wild animals, the number of casualties due to these animals being 49, as against 33 in the previous year.

Sanitation in Assam.

A Sanitary Commissioner has now been approved for Assam. The province has hitherto had only a Deputy Sanitary Commissioner.

Military Hospital Nurses.

The Government of India has sanctioned the engagement temporarily of additional fully trained nurses for duty in military hospitals in India. Applications should be addressed to the Director of Medical Services in India, Army Headquarters, Simla.

May 4th.

EUGENICS EDUCATION SOCIETY.—At an afternoon meeting, to be held at the Grafton Galleries, Grafton-street, W., to-day, Friday, June 4th, at 5.15 P.M., Professor Elliot Smith, M.D., F.R.S., will discuss the Influence of Racial Admixture in Egypt. Major Leonard Darwin will preside.

ANNUAL REPORT FOR 1913 OF THE REGISTRAR-GENERAL.

(*Concluded from p. 1149.*)

Analysis of Deaths in Institutions.

AN important addition to the reports of this series will be found in a detailed analysis of the deaths registered in institutions for the sick or infirm. In previous years these deaths had been shown separately from those occurring at home, but the scope of classification has now been considerably extended. Thus, in the present report the *ages at death* are shown in relation to the place of death, whether hospital or workhouse, and in the two preceding reports the *causes of death* are indicated in the same relation. The present tables reveal a great difference in the age distribution of deaths in the several classes of institution—the deaths in hospitals being mainly those of the young and in workhouses mainly those of the aged. A noteworthy feature in these tables is the relatively excessive proportion of institution deaths in the metropolis, amounting to 46·5 per cent. of all males and 40·9 per cent. of all females, as against percentages of 23·5 and 18·8 respectively in the provinces generally. Still more worthy of note are the figures respecting age. At ages up to the sixty-fifth year the male deaths in institutions average half the total deaths in the metropolis at those ages, whilst at age 5–15 such deaths constitute two-thirds of the total. The proportion of male deaths in institutions exceeds that of female deaths at every age group, but at ages between 5 and 45 half the deaths of London females occur in institutions. In early infancy and extreme old age institution deaths are comparatively few, except in London, where they are never less than 30 per cent. of the total.

Causes of Death.—General Diseases.

Dr. Stevenson prefaces his remarks on the causes of mortality by reaffirming the necessity of reference to the "Manual" issued by his department in 1912 for the purpose of explaining the newly adopted scheme of death tabulation, and of facilitating its application to the conditions of English statistics This scheme supersedes the method originally established by Dr. Farr and followed in the central office ever since its inception 70 years ago. Incidentally, the manual supplies information respecting the methods now pursued in the central office in the compilation of mortality returns; this is essential to thorough appreciation of their significance.

From a public health view-point the interest attaching to the statistics of infectious diseases has been greatly increased by the publication of authoritative returns showing the distribution of notifiable diseases throughout England and Wales. In the present report the returns have been arranged to show, for the several classes of area in the four geographical divisions of the country, the "prevalence" of the notified cases of particular diseases in terms of estimated population, and also their "fatality," as expressed by the ratio of deaths to cases notified. This information is, of course, supplementary to the returns of "mortality" as compared with the numbers living, which have appeared in previous years.

Enteric Fever.

In the year under review this disease was responsible for a mortality equal to 41 per 1,000,000 living in England and Wales, as compared with 44 per 1,000,000 in 1912. These are the lowest rates on record; in no year previous to 1907 had the rate been less than twice its present amount. Very unequally distributed is the loss of life from enteric fever. The usual association of excessive mortality with urban conditions was observed throughout the year. Lancashire, Northumberland, and Flintshire were the counties with the highest mortality, and the county boroughs similarly placed were Wigan, Devonport, and Kingston-upon-Hull. Not one of these boroughs had experienced a mortality of less than 110 per million in either of the last three years. Facts such as these indicate that the persistence of excessive enteric fever mortality in England is largely due to the backward sanitary position of a small number of areas. The returns of notified enteric cases in the country generally show that in 1913 both the prevalence and the fatality were lower than in the previous year. In the north, where the attacks in former years had been more numerous than elsewhere, and in Wales there was slightly increased prevalence, with some decline in the midlands and the south. Fatality was highest in the north, the region of greatest prevalence. The position of London was particularly favourable in regard both to prevalence and to fatality. In recent years there has been a marked increase in the hospital treatment of enteric fever, and there is little doubt that by diminishing opportunities for spread of infection hospital isolation has been an important factor in limiting the prevalence of this disease. The figures are not available for the year under notice, but those for previous years show that of the total deaths from enteric fever there occurred in hospitals 50 per cent. in 1911 and 48 per cent. in 1912.

Scarlet Fever.

The mortality from this disease in England and Wales was at the rate of 57 per 1,000,000 living at all ages, and of 171 per 1,000,000 at ages under 15 years. With the exception of the very low rates of the two preceding years these are the lowest on record. The decline of scarlet fever mortality during the last half century is very remarkable. Up to 1906 no year had experienced a mortality less than double that of 1911. The local distribution of mortality varies little from year to year. In the last three years the rate has been twice as high in the great towns as in the rural districts. The north of England has suffered a mortality which is double that of the south, which latter is below that of any other part of the country. The notification returns indicate that the disease was more prevalent in 1913 than in either 1911 or 1912. This increase, however, was accompanied by a decrease in fatality, which was only 16 per 1000 cases, against 18 and 19 in the two preceding years. In the north the fatality was higher than in the midlands or in the south. The extent to which scarlet fever was isolated in hospital cannot be given for 1913, but in the year immediately preceding about 65 per cent. of the deaths occurred in hospital. In London the proportion was as high as 94 per cent., whilst in the rural districts it did not exceed 40 per cent.

Diphtheria and Croup.

Inasmuch as in 1911–13 not less than 97 per cent. of the mortality from this cause occurred at ages under 15 years, the statistics now given relate mainly to that period of life. The distribution of diphtheria mortality throughout the country is given for each of the last three years, from which it appears that apart from a general tendency to increase of mortality with increase of urbanisation, there are no striking differences to record. Although the fatality from diphtheria was higher in the north than in other areas the prevalence of the disease as indicated by notification was at its lowest in that region. From this it does not follow that the disease was either severer or less satisfactorily treated there than elsewhere, for the number of notifications has recently been increased by cases of a milder type, the nature of which can only be established by bacteriological examination. While the practice of making such examinations has been more general in the south than in the north or in Wales, this fact alone may account for the much higher prevalence and lower fatality in the former region. About 80 per cent. of the London deaths from this cause occur in the hospitals of the Metropolitan Asylums Board. It is therefore instructive to learn how low is the fatality of cases now treated there in comparison with that of the years preceding the introduction of antitoxin treatment. Since 1890–93 the case fatality has fallen from 304 per 1000 admissions in that period to 65 per 1000 in 1913. About half the deaths from diphtheria and croup in England and Wales are registered in public institutions.

Tuberculosis.

In the year under notice tuberculous affections in the aggregate accounted for a mortality at the rate of 1340 per million living, which is less than that of any previous year, and is equal to 9·8 per cent. of the mortality from all causes. This satisfactory fall has occurred notwithstanding unfavourable changes in the age constitution of the population. The standardised death-rate of 1913 shows a reduction of 15 per cent. on the average of the quinquennium ended in 1910. The fall was shared equally by both sexes, but the mortality of males exceeded that of females by about one-third. The excess was greater

in town than in country; it was 68 per cent. in London and 41 per cent. in the county boroughs, but only 8 per cent. in the rural districts. Urban conditions of life increase the risk of tubercle among males much more than among females, the excess of the London rate over that of the rural districts being 91 per cent. for the former sex but only 33 per cent. for the latter. The adverse effect of town life is especially conspicuous at ages after the fifteenth year, at which age work away from home commonly begins. In childhood this effect is not observed.

Tuberculous phthisis contributed 75 per cent. to the total mortality from tuberculosis in the year under notice, the deaths corresponding to a rate of 1004 per million living at all ages, and to 7·3 per cent. of the total mortality. The local distribution of phthisis is similar to that of tuberculosis generally. There is the same tendency to increase of mortality with urbanisation, which is strongly marked among males and less so among females, so that the excess of male over female mortality increases regularly from the rural districts to the metropolis.

The period of maximum phthisis mortality occurs earlier in life in the rural districts than in the towns, and earlier among females than among males. In the metropolis an excess of mortality is experienced by old men and also by old women. Moreover, the excess of male over female mortality, as well as its increase with urbanisation, is there especially characteristic of old age.

It will be seen by the tables that the excess of male mortality which is so remarkable in England does not exist in Wales, where the rates for both sexes are about equal. In each of the last three years the north of England records a high mortality for both sexes in its great towns, but not elsewhere. The position of the midlands generally is satisfactory for both sexes.

Tuberculous meningitis caused less loss of life in 1913 than in any previous year. Its death-rate has been steadily declining for the last 60 years, and now stands at one-third of its former amount. Such a decline in a period of rapidly increasing urbanisation is the more remarkable because this affection is exceptionally associated with urban conditions of life. That this association holds good for the younger ages only is shown by a table limited to ages under 15 years, within which period 89 per cent. of the total deaths occur. In 1911–13 the mortality in London at ages under 5 was more than double that of the rural districts generally, and at ages 5–10 the excess was almost as great, but at 10–15 the rates for London and the rural districts were practically equal.

Abdominal tuberculosis, including tabes mesenterica, has been decreasing rapidly as a cause of death for the last 30 years, and now accounts for only one-third of the loss of life formerly attributed to it.

Malignant Disease.

Unfortunately no check can as yet be discerned on the increase of cancer or malignant disease which has been experienced in this country for many past years. On the contrary, the loss of life from this cause was greater in 1913 than in any previous year on record. The mortality among males was equal to 947 per million living, and among females to 1155 per million, as compared with rates of 913 and 1117 respectively in the year 1912. The cancer-rates have been standardised for the country as a whole, and for the aggregate urban districts as well as for the four geographical divisions dealt with throughout this report. The tables show a constantly increasing mortality in proportion to urbanisation, which is more serious in the case of males than of females. In Dr. Stevenson's judgment "it is quite conceivable that differences of the dimensions shown may be due to the better facilities for diagnosis in the urban areas, where a much larger proportion of the deaths occur in institutions in which post-mortem examination is the rule, than, as in private practice, the exception." The considerable increase of mortality now recorded is very uniform, being common to both sexes in every class of area. It is also widely spread over the different age periods, the chief exceptions being in the case of women at very advanced ages. The excess of female mortality over that of males is concentrated mainly on the ages 25–55. At other ages there is either practical equality or a male excess, as at ages from 60 to 85 in the country generally. The deaths from malignant disease occurring in institutions are shown separately from those in the home, the object being to compare the experience of hospitals, where presumably the details of the cause of death have been generally confirmed by necropsy, with the certification of other deaths from causes where such facilities are as a rule wanting.

The increase of mortality from cancer of various organs differs. In both sexes the most rapid rates of increase are furnished by cancer of the alimentary tract, especially the intestines and stomach. Diseases of the female breast also claim a rapidly increasing number of victims, while mortality from uterine cancer is diminishing. The relation of mortality to marital condition is discussed in the text. It would appear that childbearing increases the risk of uterine and diminishes that of mammary cancer; it may therefore be expected that the present decrease of fertility will be accompanied by an increase of mammary rather than of uterine disease. Notwithstanding the general increase the mortality from cancer of the liver remains stationary. Secondary growths are mentioned with especial frequency in cases of breast cancer. Deaths thus certified amount to 33 per cent. in the case of the breast, whereas in the case of most other important sites the proportion falls short of 10 per cent. The conditions observed as complicating death from cancer are summarised in the report. Of those which do not appear dependent on the existence of a growth the most important are tuberculosis, diabetes, diseases of the circulatory system, Bright's disease, and childbirth.

MEDICINE AND THE LAW.

The Verdict "Guilty but Insane."

THE Court of Criminal Appeal, following its own ruling in R. *v.* Felstead, recently dismissed an appeal, or rather refused to hear it, in the case of a man named Taylor indicted for unlawful wounding at Worcester quarter sessions. Taylor had been for two years a certified lunatic in Powick Asylum, of which he was an inmate when the assault with which he was charged was committed. When he was put up to plead he made rambling statements, but "after some little pressure from his counsel," to quote from the *Times* report, he pleaded guilty. Counsel for the prosecution, however, suggested that a plea of "Guilty" in such circumstances ought not to be accepted, and urged that a plea of "Not Guilty" should be entered, and the prisoner tried in order to obtain the verdict of the jury as to the state of his mind at the time of the offence. This proposal was adopted, the case was gone into, and a verdict of "Guilty but insane" was returned. The prisoner accordingly was ordered to be detained during His Majesty's pleasure, a case being stated by the bench in order to allow a decision to be obtained whether in the circumstances described above the verdict mentioned could be returned. In the Court of Criminal Appeal the preliminary point was taken, that in accordance with the decision in Felstead's case the verdict "Guilty but insane" did not constitute a conviction, and that Taylor not having been convicted could not appeal. Taylor's counsel, on the other hand, relied upon his having pleaded guilty, and declared that he had never withdrawn that plea. He argued that being convicted on his own confession his client had the right to appeal. The court upheld the preliminary point mentioned and decided that it had no jurisdiction to hear the appeal, basing its decision on the fact that the case had been heard and the verdict recorded. The Lord Chief Justice, however, in delivering judgment, expressed the opinion that through the law being as Felstead's case declared it to be, difficulties arose which were probably not foreseen when the Criminal Appeal Act, 1907, was passed. These difficulties, his lordship said, could only be removed by the legislature, which some day might see fit to amend the law. The result in this case was that no decision was given as to the question which the appellant's counsel tried to raise, that when once the prisoner had pleaded "Guilty" the court had no right to enter a plea of "Not Guilty" and try the question of his sanity. There may be a certain convenience in this course being adopted, for it can hardly be right that a lunatic with dangerous propensities should be able by saying the word "guilty" to escape the means provided by the law for restraining him in the future. At the same time it is hardly satisfactory that in so important

a case as one involving the question of a man's sanity neither the exercise of its discretion by the court nor the verdict of the jury should have been capable of being appealed against, and this not through the deliberate intention of the legislature but owing to an oversight.

The London Insurance Committee and the Allotment of Insured Persons.

The action of Mr. H. Bazett against the London Insurance Committee, based upon the failure of the latter to assign to medical men on the panel insured persons who had not selected their medical attendants, was tried by Mr. Justice Darling and a special jury recently. The plaintiff asked for a mandamus ordering the Insurance Committee to assign the persons referred to, as contemplated by the Insurance Act, and claimed damages for the Committee's failure to do so. The defendants alleged that it was absolutely impossible for them to assign the insured persons who had not chosen medical men, the system of registration being so involved and the insured population of so fluctuating a character, the constant changes of address rendering it extremely difficult, if not impracticable, to keep abreast of the alterations. It was stated by the clerk of the committee that at one time 300 clerks had been engaged upon the registers. The same witness said that out of 1200 medical men interested only five had objected to the method adopted for distributing the surplus funds. The jury intimated that they had made up their minds in favour of the defendants, but Mr. Bazett persevered with his case a little longer. Mr. Justice Darling finally intimated that in his view the legal maxim applied, "*Lex non cogit ad impossibilia*," and that the defendants had done everything in their power to carry out the regulations. The jury then found for the defendants. Apparently those who framed an Act of Parliament have made the mistake of imposing an impossible task upon the bodies to whom the task of administration was to be entrusted, and a way out of the difficulty has been found which must be accepted, although, in the opinion of Mr. Danckwerts, it was not legally justifiable. Presumably it would not be impossible so to increase the clerical staff of even the London Committee as to enable the work to be done, but the question would naturally arise whether the result would be worth the cost involved.

THE NATIONAL INSURANCE ACT.

Panel Patients during War.

AT a meeting of the West Riding Insurance Committee recently the question of the provision of medical aid for panel patients whose selected practitioner had undertaken military service was raised by a member, Mr. J. W. Waterhouse. He suggested that where a member of the panel had gone to the front the insured persons affected should be entitled to medical benefit from any practitioner in the immediate neighbourhood, or at least should be allowed to make their choice, and be assigned accordingly. Dr. J. Russell observed that the practice had been for the committee to send a post-card to the patient giving him the name of the medical man who would take him over, and it was stated that this practice had worked well. Probably in many instances patients are satisfied to do as they are told, but the matter is not an easy one, and several considerations are involved. On the one hand a medical man may have undertaken the work of a friend, intending to safeguard his interests with regard to patients whether insured or not, and from the point of view of the absent practitioner it would be right that his patients should all be attended by his selected substitute. There can, however, in such a case be no compulsion except for insured patients, and it may be questioned whether there ought to be for them, when it is remembered that they originally selected a particular practitioner and that free choice of a medical attendant is one of the points upon which the medical profession has all along insisted. Let us hope that if any difficulty arises it will not be of long duration, and that at any rate there will be no question as to securing the return of the insured to their original medical attendants when these resume civil life. At the recent general meeting of the Camberwell Insurance Practitioners' Association a resolution was carried "that insured persons who may wish to transfer from the lists of doctors on active service should not be accepted on their lists by other doctors under any circumstances." It was pointed out by Dr. G. B. Batten that this implied that a medical man should refuse to treat as an insured person the patient of a colleague on the panel after the war was over. It did not imply refusing to treat such patients during the war; they must only not be accepted permanently.

Hearts of Oak Society and Insurance.

At the annual meeting of the Hearts of Oak Benefit Society it was stated, with regard to State members, that so far as men were concerned the payments for sickness benefit had amounted to 92 and 91 per cent. of the sums estimated for 1913 and 1914 respectively. The sickness benefit for women had been slightly in excess of what had been expected, amounting to 106 per cent. of the estimate in 1913 and 108 per cent. for 1914. The number of members of the society before the passing of the Insurance Act, 1911, who under it had become insured persons had been 176,000, and of these only 96,000 had reduced their contributions. The Act had, however, imposed great difficulties upon the society, and had accentuated the problem of over-insurance.

Excessive Prescribing: Difficulties of Investigation.

The London Panel Committee, at a special meeting on June 1st, decided, in view of the heavy expenditure of time and money involved in the investigation of representations by the Pharmaceutical Committee as to alleged excessive prescribing, to limit in future the amount of time spent upon this work. The Pharmacy Subcommittee pointed out that representations had yet to be received in respect of the second part of 1914, and no useful purpose was served in discussing with practitioners prescriptions written more than a year ago. It was highly desirable that every practitioner on the panel should be informed monthly of the average cost of his prescriptions. If investigations into about 500 practitioners' scripts were continued for a whole year, as at present, the funds of the committee would be swallowed up in dealing with this branch of its work. The committee decided to inform the Pharmaceutical Committee that it would deal with the most recent prescriptions submitted and that for the present the number of separate cases investigated must be limited to 50 in each three months. The committee also resolved to withdraw from the arrangement by which it shares with the Insurance Committee and the Pharmaceutical Committee the cost of the examination of prescriptions. The reasons given were that no onus rested on the Panel Committee to contribute towards mere arithmetical checking, and that the work done under this arrangement did not save the time of the Panel Committee when investigating allegations of excessive prescribing.

The London Panel Committee and the War.

The London Panel Committee has appointed a special section to consider and report as to the steps which should be taken to enable practitioners on the panel to render the greatest possible assistance in connexion with the war. Inquiry is to be made as to the manner in which the Panel Committee may most usefully coöperate with the British Medical Association in its efforts in the matter. Dr. C. W. Hogarth has resigned the chairmanship of the Panel Committee.

THE SERVICES.

ROYAL NAVY MEDICAL SERVICE.

THE undermentioned has been granted a commission as temporary Surgeon in His Majesty's Fleet: John Paxton (dated May 21st).

The seniority of temporary Surgeon Jack Rupert Law Willis has been antedated to August 22nd.

The following appointments have been notified:—Temporary Surgeons: M. O. Raven to the hospital ship *China*; and W. L. Coullie to the *Birmingham*.

ARMY MEDICAL SERVICE.

Surgeon-General Sir David Bruce, C.B., F.R.S., is retained on the Active List, under the provisions of Article 120, Royal Warrant for Pay and Promotion, and to be supernumerary (dated May 29th).

Captain Charles A. Ballance, M.V.O., Royal Army Medical Corps, Territorial Force, to be temporary Colonel (dated May 18th).

ROYAL ARMY MEDICAL CORPS.

The undermentioned are granted the temporary rank of Major whilst serving with the Northumberland War Hospital:—Hector Duncan Macphail (dated May 12th), Cuthbert Umfreville Laws (dated May 16th), and Charles D'Oyly Grange (dated May 17th).

The undermentioned are granted temporary honorary rank whilst serving with the British Red Cross Society in France:—As Lieutenant-Colonel: Edward Stewart (dated May 29th). As Lieutenant: Edward Harman Hicks (dated May 29th).

Major Harold S. Peeke, Reserve of Officers, Royal Army Medical Corps, to be temporary Lieutenant-Colonel whilst serving with the Liverpool Merchants' Mobile Hospital (dated March 24th).

Edwin Goodall to be temporary Lieutenant-Colonel whilst employed at the Welsh Metropolitan War Hospital (dated May 1st).

The undermentioned are granted temporary rank whilst employed at the Lord Derby War Hospital:—As Lieutenant-Colonel: Alexander Simpson (dated April 1st). As Major: Frederick Millar Rodgers (dated May 24th). Alexander McLean Cato to be temporary Lieutenant (dated May 21st).

The undermentioned having ceased duty with the Queen Mary's Convalescent Home for British Officers, Nice, relinquish their commissions:—Dated 30th April: Temporary Major Samuel Macken and temporary Captains Henry S. C. Starkey and Frederick P. Nunneley.

Temporary Lieutenant John Sydney Rowlands to be temporary Captain whilst serving with the Welsh Hospital (dated May 28th). Rupert Farrant to be temporary Lieutenant (dated May 13th).

The appointment to a temporary Captaincy of John P. Campbell, late Captain 10th (Cyclist) Battalion, The Royal Scots (Lothian Regiment), Territorial Force, is antedated to April 1st, 1915).

The undermentioned to be temporary Lieutenants:—Dated March 12th: James Rashid Wortabet. Dated March 21st: Charles Montagu Harris. Dated March 23rd: Norman Edward Packer, Charles Owen Donovan, John Thomson Anderson, Robert Burnside Carter, Eric Phillip Blashki, John Lloyd Digby, Norman McAlister Gregg, Eustace Townley Pinhey, Norman Walford Broughton, Sydney William Gardiner Ratcliff, Clive Farranridge, and Arthur Wilmot Raymond. Dated March 26th: Harold John Penny, John Joseph O'Neill, and Brian William Wibberley. Dated April 4th: Bruce Maitland Carruthers, Gordon Alick Renwick, John Roberts MacCulloch, Charles Goldsborough Adams, Walter Francis Stewart Yeates, Charles Horsfall Armitage, Charles Reginald Ralston Huxtable, Francis James Fahy, Hugh Alton Chandos Wall, and Archibald Warden Graves Murray. Dated April 6th: Ernest Robertson, Basil Walter Cohen, Norman Charles Talbot, Colin Hasler Martin, Alexander Hugh Melville, Frederick Harold Moran, Archibald Simpson Anderson, and Harold Whitfield Ward. Dated April 7th: Hugh Meyrick Meyrick-Jones and William Stuart Hawthorne. Lewis Wilson Shelly (dated May 24th).

The undermentioned to be temporary Lieutenants whilst serving with the British Red Cross Hospital, Netley: Gordon Normanby Brandon (dated May 18th) and William Burt (dated May 23rd).

Temporary Lieutenant Isidore J. Block relinquishes his commission (dated May 4th).

SPECIAL RESERVE OF OFFICERS: SUPPLEMENTARY TO REGULAR UNITS OR CORPS.

Royal Army Medical Corps.

The undermentioned Lieutenants are confirmed in their rank:—Peter MacCallum, Gilbert W. Rose, Donald C. Scott, James S. Robinson, and Stanley B. King.

Cadet Serjeant George Gibson Cooper, from the Glasgow University Contingent, Officers Training Corps, to be Lieutenant (on probation).

TERRITORIAL FORCE.

Army Medical Services.

Captain William J. Hoyten, from 1st East Anglian Field Ambulance, to be Deputy Assistant Director of Medical Services, South Midland (Reserve) Division, with the temporary rank of Major.

Royal Army Medical Corps.

3rd Southern General Hospital: Hugh Anthony Bulstrode Whitelocke to be Lieutenant.

1st Lowland Field Ambulance: Frank Morton Robertson to be Lieutenant.

2nd Lowland Field Ambulance: To be Lieutenants: William Grove and William Jack Scade.

1st North Midland Field Ambulance: Captain Frederick W. Johnson, from Attached to Units other than Medical Units, to be Major (temporary).

3rd Northern General Hospital: Captain Arthur G. Yates to be Major.

1st Southern General Hospital: Major James T. J. Morrison is restored to the establishment. To be Lieutenants: Herbert Charles Horace Bracey and Arthur Harry Newton. Edward Musgrave Woodman (late temporary Lieutenant, Royal Army Medical Corps) to be Captain, whose services will be available on mobilisation.

2nd Southern General Hospital: Lieutenant James G. McLannahan, from 3rd South Midland Field Ambulance, to be Captain on the permanent personnel.

Sanitary Service: Alexander Gregor to be Captain, whose services will be available on mobilisation.

1st London (City of London) Sanitary Company: Lieutenant John H. Baldwin to be temporary Captain. To be Lieutenants: Private John Golding, from the 28th (County of London) Battalion, The London Regiment (Artists Rifles), and Gilbert Norman Anderson.

Lowland Divisional Sanitary Section: Lieutenant Thomas J. Mackie, from Attached to Units other than Medical Units, to be Lieutenant.

Lowland Casualty Clearing Station: Major George Robert Livingston, from Attached to Units other than Medical Units, to be Major. To be Lieutenants: Lieutenant Stuart Robertson, from the 1st Lowland Field Ambulance; Lieutenant Stephen Anderson MacPhee, from the 2nd Lowland Field Ambulance; Lieutenant Adam Rankine, from the 1st Lowland Field Ambulance; and William Cullen.

West Riding Casualty Clearing Station: Major Louis P. Demetriadi, from Attached to Units other than Medical Units, to be Lieutenant-Colonel (temporary).

2nd Home Counties Field Ambulance: Major Antony A. Martin to be temporary Lieutenant-Colonel.

West Riding Divisional Sanitary Section: Captain Cuthbert B. Moss-Blundell, from list of Sanitary Officers available on mobilisation, to be Captain.

Northumbrian Casualty Clearing Station: Major William A. Wetwan to be temporary Lieutenant-Colonel.

North Midland Mounted Brigade Field Ambulance: Arthur Avent (late Lieutenant of this Unit) to be Captain (temporary).

Yorkshire Mounted Brigade Field Ambulance: Captain and Honorary Major Alfred Hugh Benson, Retired List (late Royal Army Medical Corps (Militia)) to be Captain (temporary). Joseph Charles Denvir to be Lieutenant.

3rd North Midland Field Ambulance: James Edwin Wilson to be Lieutenant.

1st West Riding Field Ambulance: Lieutenant Herbert B. Pope to be temporary Captain.

5th Northern General Hospital: The undermentioned to be Captains, whose services will be available on mobilisation: Everard Harrison, Henry Mason, Neville Ivens Spriggs, Ernest William Holyoak, and Frederick Valentine Milburn.

Highland Casualty Clearing Station: John Innes (late Captain, 2nd Highland Field Ambulance) to be Captain (temporary).

2nd East Anglian Field Ambulance: Captain Dudley William Boswell to be temporary Major.

3rd Home Counties Field Ambulance: John Francis Molyneux to be Lieutenant.

2nd West Lancashire Field Ambulance: Captain Walter L. Hawksley to be temporary Major.

3rd Lowland Field Ambulance: Captain James Young to be temporary Major.

4th London General Hospital: Major William A. Turner is restored to the establishment.

1st Northern General Hospital: William Stott to be Lieutenant.

1st Western General Hospital: Walter Charles Oram to be Captain, whose services will be available on mobilisation. Charles Philip Brentnall to be Lieutenant. Leslie Oldershaw to be Lieutenant.

2nd Western General Hospital: Harry Platt to be Captain, whose services will be available on mobilisation.

Attached to Units other than Medical Units.—Major Robert J. R. C. Simons is seconded. To be Captains: Temporary Captain John B. Bate and Lieutenant Hugh Paterson. To be Lieutenants: David Alexander Ross Haddon (late Lieutenant, 9th (Highlanders) Battalion, The Royal Scots (Lothian Regiment)), Lieutenant John J. Porter (from 3rd Welsh Field Ambulance), William Hall Calvert (late Surgeon-Lieutenant, 1st Roxburgh and Selkirk (The Border Rifle Volunteer Corps)), John K. Brownlees, Leonard Herbert Henry Boys, Thomas Sprot Allan (late Surgeon-Lieutenant, 1st Volunteer Battalion, Middlesex Regiment), and William Joseph Lacy-Hickey. Lieutenant George W. Mason resigns his commission on account of ill-health.

TERRITORIAL FORCE RESERVE.

Royal Army Medical Corps.

Lieutenant-Colonel William McGregor Young, from the West Riding Casualty Clearing Station, to be Lieutenant-Colonel.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

In the 96 English and Welsh towns with populations exceeding 50,000 persons at the last Census, 8530 births and 5340 deaths were registered during the week ended Saturday, May 22nd. The annual rate of mortality in these towns, which had steadily declined from 19·9 to 14·2 per 1000 in the six preceding weeks, rose in the week under notice to 15·4 per 1000 of their aggregate population, estimated at 18,136,180 persons at the middle of last year. During the first seven weeks of the current quarter the mean annual death-rate in these towns averaged 17·0, against a corresponding rate of 17·7 per 1000 in London. The annual death-rate in the week under review ranged from 7·9 in Wimbledon, 8·6 in Oxford, 8·8 in Edmonton and in Rhondda, 9·3 in East Ham, in Reading, and in Bolton, and 9·4 in Leyton, to 23·9 in Wigan, 25·1 in Dewsbury, 25·8 in Gateshead, 28·9 in Middlesbrough, and 29·9 in Walsall.

The 5340 deaths from all causes were 386 in excess of the number in the previous week, and included 603 which were referred to the principal epidemic diseases, against numbers declining from 711 to 484 in the three preceding weeks. Of these 603 deaths, 309 resulted from measles, 137 from whooping-cough, 70 from infantile diarrhœal diseases, 51 from diphtheria, 20 from scarlet fever, 15 from enteric fever, and 1 from small-pox. The mean annual death-rate from these diseases was equal to 1·7, or 0·3 per 1000 more than in the previous week. The deaths attributed to measles, which had been 392, 276, and 238 in the three preceding weeks, rose to 309 in the week under notice, and caused the highest annual death-rates of 2·6 in St. Helens, 2·7 in Wolverhampton, 3·5 in Gateshead, 4·0 in Barrow-in-Furness, 4·2 in Sheffield, 4·4 in Sunderland, 5·5 in Walsall, and 7·0 in Middlesbrough. The deaths referred to whooping-cough, which had steadily declined from 167 to 105 in the six preceding weeks, rose to 137, and included 41 in London, 8 each in Wigan and Salford, 7 in Liverpool, 5 in Leeds, and 4 each in Bristol, Manchester, and Sheffield. The fatal cases of diarrhœa and enteritis (among infants under 2 years), which had been 73, 67, and 57 in the three preceding weeks, rose to 70, of which 15 were registered in London, 7 in Liverpool, 6 in Manchester, and 4 in Birmingham. The deaths attributed to diphtheria, which had been 56, 51, and 48 in the three preceding weeks, rose to 51, and included 15 in London, and 3 each in Manchester and Sheffield. The deaths referred to scarlet fever, which had been 34, 30, and 25 in the three preceding weeks, further fell to 20, of which 5 occurred in London, and 2 each in Stoke-on-Trent and Manchester. The fatal cases of enteric fever, which had been 12, 12, and 11 in the three preceding weeks, rose to 15, and included 4 in London and 2 in Leeds. The death from small-pox was registered in Bristol.

The number of scarlet fever patients under treatment in the Metropolitan Asylums Hospitals and the London Fever Hospital, which had been 2377, 2384, and 2332 at the end of the three preceding weeks, had further declined to 2286 on Saturday, May 22nd; 320 new cases were admitted during the week, against 316, 307, and 270 in the three preceding weeks. These hospitals also contained on the aforementioned date 1123 cases of diphtheria, 158 of measles, 55 of enteric fever, 12 of whooping-cough, and 1 of small-pox. The 1288 deaths from all causes in London were 33 in excess of the number in the previous week, and corresponded to an annual death-rate of 14·9 per 1000. The deaths referred to diseases of the respiratory system, which had declined from 469 to 227 in the five preceding weeks, further fell to 212 in the week under notice, but were 24 in excess of the number recorded in the corresponding week of last year.

Of the 5340 deaths from all causes in the 96 towns 235 resulted from different forms of violence and 380 were the subject of coroners' inquests, while 1546 occurred in public institutions. The causes of 46, or 0·9 per cent., of the total deaths were not certified either by a registered medical practitioner or by a coroner after inquest. All the causes of death were duly certified in Sheffield, Leeds, Bristol, West Ham, Bradford, Hull, Newcastle-on-Tyne, and in 68 other smaller towns. Of the 46 uncertified causes of death, 9 were registered in Birmingham, 5 in Gillingham, 4 in Liverpool, and 3 each in Southport and Warrington.

HEALTH OF SCOTCH TOWNS.

In the 16 largest Scotch towns with an aggregate population estimated at 2,345,500 persons at the middle of this year, 1121 births and 724 deaths were registered during the week ended Saturday, May 22nd. The annual rate of mortality in these towns, which had been 20·2, 18·1, and 17·9 per 1000 in the three preceding weeks, further declined to 16·1 per 1000 in the week under notice. During the first seven weeks of the current quarter the mean annual death-rate in these towns averaged 18·9, against a corresponding rate of 17·0 per 1000 in the large English towns. Among the several towns the death-rate in the week under review ranged from 4·9 in Clydebank, 8·9 in Kirkcaldy, and 11·4 in Aberdeen, to 18·6 in Ayr, 18·8 in Motherwell, and 19·1 in Perth.

The 724 deaths from all causes were 83 fewer than the number in the previous week, and included 90 which were referred to the principal epidemic diseases, against numbers declining from 150 to 117 in the three preceding weeks. Of these 90 deaths, 40 resulted from whooping-cough, 36 from measles, 6 from scarlet fever, 5 from infantile diarrhœal diseases, 2 from diphtheria, and 1 from enteric fever, but not one from small-pox. The mean annual death-rate from these diseases was equal to 2·0, against 1·7 per 1000 in the large English towns. The deaths attributed to whooping-cough, which had been 82, 65, and 45 in the three preceding weeks, further declined to 40 in the week under notice, and comprised 22 in Glasgow, 11 in Edinburgh, 4 in Dundee, 2 in Falkirk, and 1 in Motherwell. The deaths referred to measles, which had increased from 19 to 49 in the five preceding weeks, fell to 36, of which 26 occurred in Glasgow, 4 in Aberdeen, 3 in Dundee, 2 in Falkirk, and 1 in Perth. The fatal cases of scarlet fever, which had been 11, 7, and 6 in the three preceding weeks, were again 6 in week under review, and comprised 5 in Glasgow and 1 in Aberdeen. The deaths of infants (under 2 years) attributed to diarrhœa and enteritis, which had been 9, 15, and 9 in the three preceding weeks, further fell to 5, of which 2 were registered in Glasgow. The fatal cases of diphtheria were recorded in Glasgow and Edinburgh, and that of enteric fever in Glasgow.

The deaths referred to diseases of the respiratory system, which had been 153, 118, and 121 in the three preceding weeks, fell to 117 in the week under notice, but were 10 in excess of the number recorded in the corresponding week of last year. The deaths attributed to violence numbered 21, against 23 and 26 in the two preceding weeks.

HEALTH OF IRISH TOWNS.

In the 27 town districts of Ireland, with an aggregate population estimated at 1,212,380 persons at the middle of this year, 680 births and 425 deaths were registered during the week ended Saturday, May 22nd. The annual rate of mortality in these towns, which had been 19·1, 19·9, and 18·8 per 1000 in the three preceding weeks, fell to 18·3 per 1000 in the week under notice. During the first seven weeks of the current quarter the mean annual death-rate in these towns averaged 20·6, against corresponding rates of 17·0 and 18·9 per 1000 in the English and Scotch towns respectively. The death-rate in the week under review was equal to 20·8 in Dublin (against 14·9 in London and 18·0 in Glasgow), 16·7 in Belfast, 21·8 in Cork, 12·7 in Londonderry, 10·8 in Limerick, and 30·4 in Waterford, while in the 21 smaller towns the mean rate was equal to 16·1 per 1000.

The 425 deaths from all causes were 13 fewer than the number in the previous week, and included 24 which were referred to the principal epidemic diseases, against numbers declining from 41 to 27 in the four preceding weeks. Of these 24 deaths, 9 resulted from measles, 5 from whooping-cough, 4 each from scarlet fever and infantile diarrhœal diseases, and 2 from diphtheria, but not one from enteric fever or from small-pox. The mean annual death-rate from these diseases was equal to 1·0, against corresponding rates of 1·7 and 2·0 per 1000 in the English and Scotch towns respectively. The deaths attributed to measles, which had declined from 13 to 4 in the four preceding weeks, rose to 9 in the week under notice, and comprised 4 each in Dublin and Belfast and 1 in Cork. The deaths referred to whooping-cough, which had been 9, 9, and 10 in the three preceding weeks, fell to 5, and included 3 in Dublin. The 4 fatal cases of scarlet fever, of which 3 occurred in Waterford and 1 in Lisburn, were 2 in excess of the average in the earlier weeks of the quarter. The deaths of infants (under 2 years) attributed to diarrhœa and enteritis, which had been 10, 9, and 8 in the three preceding weeks, further fell to 4, and were all registered in Dublin. The fatal cases of diphtheria were recorded in Dublin and Kilkenny.

The deaths referred to diseases of the respiratory system, which had been 84, 76, and 82 in the three preceding weeks, further rose to 93 in the week under notice. Of the 425 deaths from all causes, 137, or 32 per cent., occurred in public institutions, and 8 were attributed to different forms of violence. The causes of 12, or 2·8 per cent., of the total deaths were not certified either by a registered medical practitioner or by a coroner after inquest; in the large English towns the proportion of uncertified causes did not exceed 0·9 per cent.

Correspondence.

"Audi alteram partem."

THE PULSUS ALTERNANS.

To the Editor of THE LANCET.

SIR,—Dr. C. O. Hawthorne's interesting paper in THE LANCET of May 29th opens up a question that I have often asked myself: When is a pulsus alternans not a pulsus alternans, so far as its now usually accepted gravity of prognosis goes? Dr. Hawthorne, alluding to this, gives at the end of his paper the case of a young woman who has not died as she should have done, and his earlier remarks and the tracings given from sphygmograph and manometer seem to me to suggest the answer. In thus showing that a pulsus alternans is of quite a common occurrence, he describes what surely must be the common experience of us all. Everyone must be familiar with the fact that at the radial pulse at the wrist every heart beat need not have an equivalent value, and this variation may range from complete intermission down to a lessening of force that cannot be recognised by the finger. One had almost said when we are dealing with a muscular organ such as the heart with the variety of minor details that energise it and detract from its nervous supplies, it could hardly be otherwise. This in nowise detracts from the value of the observation that there is a pulsus alternans that has a grave significance; it does go to show that one may expect at times a pulsus alternans that has not such an ominous outlook. And surely there must be many who have lived—well! to pre-senility—who have met with this condition many a time, with *a* form but not *the* grave form of pulsus alternans. I have also met occasionally with a sort of double pulsus alternans, two full beats followed by two small beats, that had no serious meaning.

Then how are we to distinguish between the two? I may leave others to answer this question. For myself I shall only venture to suggest that the serious form generally goes with signs of cardiac failure, whilst the alternation to which I am directing attention comes and goes—sometimes the rhythm may change two or three times in one examination—and maybe in quite young people who have no signs whatever of any cardiac distress. It is clearly a neuromuscular eccentricity of action that has no serious meaning. There are other points in Dr. Hawthorne's paper quite well worth taking up, and chief of them, to my mind, is the comparative value of the sphygmograph and the manometer. It has always seemed to me that the latter is a much less precise and reliable instrument than the sphygmograph which has so much yielded place to it. There can be no doubt that the facts of the pressure gauge, if so I may call the manometer, require the most careful valuation before drawing inferences therefrom.

I am, Sir, yours faithfully,

May 31st, 1915. JAMES F. GOODHART.

THE USE OF ATROPINE IN GASSED PATIENTS.

To the Editor of THE LANCET.

SIR,—I have just been reading Dr. Douglas V. Cow's article on this subject in THE LANCET of May 29th, and am particularly interested in his experiments. It had struck me that atropine might be of use, for I have taken it for acute bronchitis with the typical tightness across the chest and difficulty in breathing, and the mixture which used to give the greatest and quickest relief was one containing liq. atrop. sulph. ♏ ix. (which must be fresh) ad ℥ vi.; dose, ℥ ss.

As a student, when making chlorine gas, although we used draught cupboards, I inhaled the gas rather too freely, and I well remember the tightness across the chest and uncomfortably difficult breathing it produced. The symptoms got worse after I had got home—about two hours after I should think. If I had to face chlorine, besides a mask I would provide myself with some liq. atrop. sulph., and I would take one dose before the cloud was on me. Dr. Cow's article would make me more inclined than ever to try atropine.

I am, Sir, yours faithfully,

IDA C. TENGELY, M.D. Lond.

Bishop's Stortford, May 29th, 1915.

THE MEDICAL DEFENCE UNION AND THE NATIONAL INSURANCE COMMISSIONERS.

To the Editor of THE LANCET.

SIR,—The letter written by Dr. A. E. Larking in your issue of May 29th makes it clear to me that he has failed to understand the position which the Medical Defence Union has taken up in respect of the surcharging of panel practitioners. The Union, by raising certain actions on behalf of members who are panel practitioners, is not attacking the National Insurance Acts or seeking to hamper the working of the Acts, but is merely endeavouring to protect its members against the effect of certain regulations of the Commissioners which the Union is advised are not in conformity with the Acts and are therefore *ultra vires*, and also to defend them against any action of the Insurance Committees which may appear to be arbitrary and wrongful. The Union therefore desires to take the opinion of the court as to the regulations and the procedure of Insurance Committees in administering the Acts.

We have already obtained a decision by the Commissioners in the Sheffield case, whereby the proceedings taken by the Panel Committee in surcharging were quashed at our instance.

In raising test actions in the High Court we are merely seeking to confirm and to extend the scope of that decision of the Commissioners. We are not seeking to destroy the Act; Parliament alone can either amend or annul it. As long as the Act exists it is imperative that we should, on behalf of our members, see that it is carried out legally and impartially; and we shall continue this duty, I trust, as long as the Act or the Medical Defence Union lasts. Dr. Larking appears to consider that the administration of the Act is unassailable; well, that is his opinion, but it is not mine, which is based upon the record of past successes in the High Court and elsewhere. If Dr. Larking could only see and read my daily correspondence from panel practitioners he would realise that a rapid rise of discontent as to the working of the Act is setting in all over the country.

I am, Sir, yours faithfully,

A. GEORGE BATEMAN.

Trafalgar-square, W.C., June 2nd, 1915.

To the Editor of THE LANCET.

SIR,—With regard to the letter by Dr. A. G. Bateman appearing in your issue of May 22nd, it will be granted that for the moment conservation

of energy is imperative against the Empire's foe, and litigation at home should not be encouraged. Tact and judgment must be welcomed in this crisis for the greatest benefit to the community at the least expense, for the avoidance of surcharge for extravagance in prescribing for insured persons, and for steering clear of other technicalities in connexion with the working of the Act.

Is it possible to fix a Government estimate without a definite capitation grant for medicaments? The importance, however, of diet, regimen, pharmacology, and therapeutics, which form the staple practice of most practitioners, deserves a higher status in the curriculum, and such might with advantage be studied in the light of economy as well as efficiency and practicability. Knowledge and experience would then counteract indulgence in fancy and expensive prescribing.

I am, Sir, yours faithfully,

Gower-street, W.C., May 26th, 1915. DENNIS VINRACE.

To the Editor of THE LANCET.

SIR,—With regard to the letter on this subject appearing in your issue of May 29th, as a non-panel man I also strongly oppose using the funds of the Medical Defence Union for helping panel doctors out of the mire which they brought on themselves by signing the National Insurance pledge and then going back on their written word. Rather would I see it used in attempting to punish those half a dozen doctors who at the beginning started the rout. I thank heaven every day that I am no servant of any Insurance Committee, and that I have never gone back on my word.

I am, Sir, yours faithfully,

Streatham, S.W. May 30th, 1915. E. H. WORTH.

TREATMENT OF POST-INFLUENZAL COUGH BY BRITISH-MADE LYSOL.

To the Editor of THE LANCET.

SIR,—In company with thousands of others I had my yearly attack of influenza six weeks ago. I remained in bed two days, then went to work again as usual, but felt quite limp for the next three weeks; at the end of which time I began to pick up, but never lost a troublesome cough. It kept me awake at night, and in the morning I coughed until I had got rid of quantities of mucus of all consistencies. Where it all came from I am at a loss to understand; it collected in the upper part of the trachea and larynx. I had no chest symptoms.

I had on my table a bottle of British-made lysol sent as a sample. I was only interested in it because it was stated that used as an ointment, 10 per cent., it cured the worst cases of scabies, and I am getting it tried for mange and other skin troubles in dogs, so far with favourable results. Two days ago I was smelling at the bottle for some reason or other when it struck me that it might be good for my cough. I put about 4 oz. of boiling water into a small jug and poured on it about a drachm of the lysol and then inhaled the fumes for about five minutes. They made my nose and throat tingle a little but had no other unpleasant effect. I coughed a bit afterwards, then my cough stopped and has given me very little trouble since. I slept quite comfortably that night and coughed about twice the next morning instead of 30 or 40 times. I slept all the next night without waking and did not cough the next morning (May 16th).

On that day I tried myself pretty high. At 5 o'clock I paraded with about 200 other special constables at Marlborough-street police station; 99 of us were marched to Oxford Circus station, from there we went by train to Bow, marched from the railway station to the police station, were mustered with others in the station yard, and for the next four hours were in the streets in pouring rain and puddles galore under foot, or in the station in rooms reeking of wet clothing, with "draughts to the right of us, draughts to the left of us, draughts in front of us," and it may be added "draughts behind us." At 11 o'clock we were dismissed and returned to Marlborough-street by the same route. I got to bed at 12.45 and slept soundly till 7. The following day I had no cough.

There may have been other causes in operation—for one thing the weather got much milder and the wind went out of the north-east—but I was inclined to believe that inhalation of lysol cured my cough, and I was convinced of it after trying it again. A night later I was coughing again, and I feel I must sound a note of caution here. I fancy it may have a stupefying effect. I used the remedy in an ordinary spirit boiler, and as soon as a good cloud of steam began to rise put my nose and mouth well into it, and as near the boiling fluid as possible, and breathed deeply. In about two minutes I got drowsy and was very near dipping the end of my nose into the hot liquid, which would no doubt have proved an excellent restorative. There may be a source of fallacy here, because it was my bed-time, and I had been in the streets for the greater part of the two preceding nights, and could have slept standing up against a wall. Another thing, I am not sure that lysol used in too strong solution or inhaled for too long at a time may not be irritating to the respiratory mucous membrane, for on the last occasion I experienced something of the sensation which all of us who can remember when there were no other lucifer matches than the old-fashioned sulphur matches have felt if we tried to light a pipe or perform any such operation near the nose and mouth without waiting till the brimstone had burnt off.

I have given my experience for what it is worth, and hope it may be of use to others. I would suggest that the solution I used was too strong; it is somewhere between 1–60 and 1–30, very likely more, and I expect 1–100 is plenty strong enough. I did not measure the lysol; I have measured the whole mixture I used and it is 4 oz.

I am, Sir, yours faithfully,

CHARLES HIGGENS, F.R.C.S. Eng.

Brook-street, W., May 28th, 1915.

PS.—The inhalation might be tried in whooping-cough.

PRESENTATIONS TO MEDICAL MEN.—At a meeting of the members of the Totterdown and Imperial Divisions of the City of Bristol Corps, St. John Ambulance Brigade, held on May 21st, the Deputy Commissioner (Mr. J. S. Griffiths, M.R.C.S., L.R.C.P. Lond.), on behalf of the divisions, presented Mr. Joseph John Scammell Lucas, B.A., M.D. Lond., M.R.C.S., L.R.C.P., with a framed illuminated address and a walking stick "as a small appreciation of his services to the class and in the divisions for many years."—The members of the Brighton Division of the St. John Ambulance Association have just presented Mr. J. A. Amherst Orlebar, M.B., B.C. Cantab., with a silver cigarette box "as a token of their appreciation and esteem." Dr. Orlebar is leaving England on active service.

THE BELGIAN DOCTORS' AND PHARMACISTS' RELIEF FUND.

SUBSCRIPTIONS OF THE WEEK.

WE call special attention to the generous and fruitful action of the Sunderland doctors who have paid into the Fund their fees for the examination of recruits. Last week we acknowledged from 14 of these gentlemen a donation in the aggregate amounting to no less than £142 2*s*. 6*d*. This week from 16 gentlemen the Fund has received a cheque for close upon £170, making over £300 received from this one source. Considering the numberless directions in which the work of medical men at the present moment is being increased in bulk and curtailed in emolument, the action of the Sunderland practitioners is a very open-handed one.

THE DISTRIBUTION OF THE FUND.

On Friday, May 28th, the recent official reports of three séances of the Aide et Protection aux Médecins et Pharmaciens Belges Sinistrés reached us through the kind offices of Professor Jacobs. This, it will be remembered, is the title of the committee formed in Belgium for ascertaining where the need is greatest among the Belgian doctors and pharmacists and for providing systematic relief. The president is Dr. Péchère, the secretaries M. Delacre and M. Laruelle, and the office is in Brussels; and it is upon this body, now strongly organised, that the British Fund is relying for distribution of its resources in Belgium.[1] When a representative of the Aide et Protection aux Médecins et Pharmaciens Belges met the Central Committee of the British Fund late in March he explained the way in which the Belgian Committee were compiling information to guide them in their work, and it was then decided that a substantial sum of money should be despatched immediately to Belgium, through the medium of certain banks and with the help of Mr. Herbert Hoover, the chairman of the National Relief Fund. An acknowledgment of this money was received from Dr. Péchère, but without details as to its distribution. These are now briefly supplied through the reports of séances held on April 15th, 22nd, and 29th. The physicians and pharmacists relieved include such cases as the following, which have been extracted from the fourth report of M. Laruelle dealing with the medical men, and from the report of M. Breugelmans dealing with pharmacists:—

To Dr. C——, of D——, it proposes to make a grant of 700 fr. Dr. C—— has had his house burnt with all its contents. He was obliged to take refuge at C—— and afterwards at W——. D——, the population of which has been reduced to one half, shelters now only a population which is deprived of resources, not affording, therefore, any opportunity to practitioners to gain their livelihood.

To Dr. R——, of T——, a grant of 400 fr. Our old colleague (aged 86 years) has seen his house with all its contents burnt. He was obliged to take refuge at M——. He would accept the temporary aid of the Committee, not being able at the present time to realise his resources.

Madame D——, of T——. Husband killed; three houses burnt with the pharmacy. Took refuge with a servant in the dwelling of a cousin who had left for Nice before the war. Had 2000 fr. in ready cash when she departed from T——. Was obliged to live ten days at B—— with her husband suffering agonies. Had to pay after the death of the latter the expenses of living, nursing and attention, and the funeral expenses. Was obliged to borrow from one of her parents at B——, to-day himself deprived of resources, the money which served to provide the food of M. D—— and his servant in the borrowed dwelling which they occupy. Life of privation. Rarely eats meat. Has only one outfit of mourning bought at the commencement of her widowhood. Merits assistance which will be well bestowed. The Committee to grant 700 fr.

M. P. V. M——, of T——. Now at M—— and at S—— alternatively. The pharmacy and druggist's business completely burnt out. Family responsibilities: wife, five sons, and servant. The man who has suffered this loss is 51 years old, has personal resources which the war has much encroached upon. The Committee has decided to make a further inquiry to learn if the need for urgent intervention is corroborated.

All the recommendations of M. Laruelle and M. Breugelmans were agreed to.

The 50 cases of medical material, despatched last December by the Central British Committee, were found to have been of use to the medical men who were able to distribute them gratuitously to their poorer clients; they have been used exclusively in this way.

There was discussion at the séance of April 15th, and again on April 22nd, as to the most expeditious way of allocating the relief, and it was decided to rely on the reports of the delegates. At the séance of April 29th it was agreed to pay monthly subsidies to those who cannot support themselves, even if they have been relieved before.

[1] See THE LANCET, April 3rd, p. 718, and April 24th, p. 883.

THE RESPONSIBILITY OF GREAT BRITAIN TOWARDS BELGIUM.

A letter having reached the Central Committee from Dr. Riddle Goffe, of New York, through which it was clear that the attitude of the British Government in respect of its monthly subsidies to the American Commission for Relief in Belgium was misunderstood in the United States, the questions raised by Dr. Goffe were submitted to the British Foreign Office, from whom the following reply was received. It has been decided to publish the reply of the Foreign Office, as from certain references to the situation in American newspapers and publications it is evident that there is still a complete misunderstanding of what occurred, and this might act to the prejudice of any funds being raised in the United States.

Foreign Office, April 26th, 1915.

SIR,—With reference to your letter of the 21st instant, enclosing a copy of a letter from Dr. J. Riddle Goffe regarding the question of Belgian relief, I am directed by Secretary Sir E. Grey to inform you that your correspondent appears to allude to the following facts.

The work of the American Commission for Relief in Belgium consists of two departments—the Benevolent Department, which is concerned with the furnishing of foodstuffs to the destitute in Belgium, and the Provisioning Department, which is concerned with the purchase and sale of foodstuffs to the rest of the population who are still able to pay. The first department has been financed out of private contributions, except for a grant of £100,000 made by His Majesty's Government in October to start the work. The second department has been financed by the Belgian Government.

Last December the Commission asked His Majesty's Government to make a monthly contribution out of public funds to the Benevolent Department. After prolonged negotiations His Majesty's Government decided that they would not be justified in doing so, as it was found impossible to induce the German Government to abandon their extortionate levies of money on the Belgian population. This department of the Commission's work is, therefore, still financed out of private contributions. But your correspondent

does not appear to be aware that out of the total private contributions in money and kind received by the Commission up to the date of their last report (April 17th), while the United States has with great generosity subscribed about £980,000, the British Empire has subscribed about £700,000, and this in addition to the military burdens borne by the Empire, the very large sums subscribed to the maintenance of Belgian refugees, and also the credits placed by His Majesty's Government at the disposal of the Belgian Government, out of which that Government is providing for the work of the Commission's Provisioning Department.

As regards the non-interference by the German authorities with the Commission's imports, it must be pointed out that those authorities are thereby acting in their own interests, since the Commission is relieving them of a clear responsibility which they have refused to assume.

Apart altogether from the assistance consistently given in various ways by His Majesty's Government to the Commission, of which it is rather for the Commission itself than for His Majesty's Government to speak, Sir E. Grey feels it to be only just to private persons in this country and the British Dominions who have so largely subscribed to this work and are probably about to subscribe still more largely, that these facts should be made clear, and he has no objection to a copy of this letter being communicated to Dr. Goffe should you desire to do so.

I am, Sir, yours, &c.,

EYRE A. CROWE.

To Dr. S. Squire Sprigge, THE LANCET Offices, W.C.

THE WEEK'S SUBSCRIPTIONS.

The subscriptions received by Dr. Des Vœux up to Tuesday evening last, in addition to those previously acknowledged, are as follows:—

	£	s.	d.
Southern Branch, B.M.A. (per Dr. Jas. Green, Hon. Sec.) (seventh donation—total, £62 5s. 6d.)—			
Dr. J. P. Watkins ...	1	1	0
Sheffield and District Branch of Fund (per Dr. A. E. Naish (Hon. Sec.) (second donation—total, £350)	100	0	0
Knowle, Bristol, Doctors at (per Dr. H. F. Davis)	3	10	6
North of England Branch of Fund (per Dr. James Don and Mr. A. S. Perceval, Hon. Secs.) (twelfth donation—total, £686 7s.)—			
Dr. S. Vernon Robinson	1	1	0
Further fees for examination of recruits by members of Sunderland Division during 1914—			
Dr. McPherson	14	12	6
Dr. G. E. Welford ...	2	2	6
Dr. G. B. Morgan, jun.	2	17	6
Dr. J. C. Hamilton ...	8	2	6
Dr. G. Murray	7	17	6
Dr. W. K. Russell ...	10	7	6
Dr. J. B. Morton ...	20	2	6
Dr. W. Hunter	16	15	0
Dr. R. Stobo...	12	0	0
Dr. J. Martin	6	17	6
Dr. J. Smith	7	12	6
Dr. J. A. Ross	9	10	0
Dr. W. H. Maling ...	16	10	0
Dr. R. H. Dix	5	7	6
Dr. W. Hay	18	10	0
Dr. S. McNaughton ...	9	7	6
Dr. C. A. Rayne	3	3	0
North-East London Pharmacists' Association, collected by (per Mr. W. A. Scott)—			
Mr. T. F. Tabor	1	15	0
Chemists' Assistants Association (per Mr. E. Thompson)	5	0	0
"Formulæ" (per Mr. A. Chapman)	0	10	0
Mr. A. Chapman	0	13	11
Australasian Pharmaceutical Conference (per the Agent-General)—			
Victoria	50	0	0
South Australia... ...	34	0	0

Subscriptions to the Fund should be sent to the treasurer of the Fund, Dr. H. A. Des Vœux, at 14, Buckingham-gate, London, S.W., and should be made payable to the Belgian Doctors' and Pharmacists' Relief Fund, crossed Lloyds Bank, Ltd.

THE NATIONAL PEOPLE'S PALACES ASSOCIATION.—This association, the object of which is to extend to the working classes in industrial districts the comfort and brightness offered by tea and coffee houses and general cafés, has now been registered under the Industrial and Provident Societies Acts for the supply of non-alcoholic refreshments at popular prices in armament works and at "palaces" to be established in suitable localities. Mr. Lloyd George has indicated his approval of the association's aims, while Mr. Bonar Law and Mr. Steel-Maitland are associated with the enterprise. Full information may be obtained upon application to the secretary of the National People's Palaces Association, 1, Albemarle-street, Piccadilly, London, W.

The War.

THE CASUALTY LIST.

THE following names of medical officers appear in the casualty lists published since our last issue:—

Killed: Surgeon Frederick W. Quirk, R.N. (on the *Princess Irene*).

Died of wounds: Captain J. C. Matheson, 5th Australian Medical Corps.

Wounded: Lieutenant C. M. Smith (attached 8th Royal Scots, T.F.), Lieutenant J. P. Mitchell, Captain L. C. Hayes (also gas poisoning), Captain E. U. Russell, Captain T. O. Thompson (attached 18th Hussars), Lieutenant G. D. Maclean, all of R.A.M.C.; Major H. C. de Legh (attached 4th Yorks Regiment), Captain H. B. Cunningham, Captain W. E. F. Tinley (attached R.F.A.), Captain J. Murdoch, all of R.A.M.C., T.F.; Captain L. W. Jeffries, 4th Australian Field Ambulance; Surgeon E. G. Schlesinger, Surgeon W. J. McCracken, both R.N.

Captain Stephen Field, R.A.M.C., who was announced in our issue of May 22nd as having been killed in action, died at the Prisoners' Camp, Wittenberg, Saxony, which is one of the camps reported as infected with typhus fever.

DEATHS AMONG THE SONS OF MEDICAL MEN.

The following names must be added to the sons of medical men who have fallen in the war: Lieutenant G. G. Hodgson, elder son of Dr. G. Hodgson, of Chertsey; Lieutenant C. G. Harper, eldest son of Dr. J. Harper, of Rosary-gardens, London, S.W.; Lieutenant J. E. B. Miller, only son of Dr. J. E. Miller, of Londonderry; Lieutenant N. C. MacLehose, younger son of Dr. N. M. MacLehose, of Harley-street, London, W.; and Lieutenant R. W. H. Empson, elder son of Dr. J. Empson, of Milborne Port, Somerset.

THE HONOURS LIST.

The list of honours published on the birthday of King George has close reference to the war, most of the recipients being, as might have been expected, engaged in one way or another in leading the national energies in the great struggle. Medicine is but sparsely represented among these leaders, for enormously valuable to the cause as medicine is, in personnel its numbers are small; the fact that but few medical names appear in the list indicates that in every branch of military activity special services have to be recognised.

We congratulate the following:—Surgeon-General T. M. Corker is appointed C.B.; Dr. A. W. G. Bagshawe, director of the Tropical Diseases Bureau, is appointed C.M.G.—the value to our army of the organised study of tropical diseases has been very great; Major E. J. O'Neill (New Zealand Medical Corps) and Captain A. G. Butler (Australian Army Medical Corps) receive the D.S.O.; Lieutenant-Colonel C. C. S. Barry, I.M.S., is appointed C.I.E.; Lady Lukis, the wife of the Director-General of the Indian Medical Service, and Lieutenant-Colonel T. F. Pedley (Rangoon Port Defence Volunteers) receive the Kaisar-i-Hind medal; and Dr. J. E. A. Ferguson is appointed I.S.O.

We note elsewhere the knighthoods bestowed upon Sir James Mackenzie and Sir Frederick Needham, as being civilian honours,

THE SOUTH AFRICAN AMBULANCE HOSPITAL AT CANNES.

We have received from M. Réné Juta, the Secretary of this hospital, an account of the first and only South African unit in Europe, which is also probably the largest British hospital working for the French Service de Santé. It comprises 3 surgeons, 9 sisters, 10 nurses, 6 dressers, 1 accountant, 1 secretary, 4 motor drivers. It has 200 beds and 3 motor ambulances, all equipped and subscribed for in South Africa by private and public funds for work in Europe, in spite of the fact that the Union has recently had rebellion on its hands and is carrying on its own arduous campaign in German South-West Africa. The ambulance was accepted by the French Service de Santé, and its personnel were asked to equip and organise a base hospital at the Beau Rivage, Cannes. The hospital has been commended by the French Government, and is admirably equipped. The wounded come almost direct from the trenches of Verdun and the Argonne.

There are two committees, one in Cape Town with the Chief Justice as chairman, the other in London with Lord Gladstone as chairman, Lord Islington, honorary treasurer, and Mr. Wilson Fox (of the Chartered Company) as secretary. There is also a ladies' committee in London, of which Mrs. Lewis Harcourt is President. A bacteriological laboratory and X ray apparatus and outfit have been given to the hospital by the London committee. In addition the hospital has a dental surgery under a fully qualified dental surgeon. At the time of writing 193 patients have been admitted, with 2 deaths, while 61 patients have been sent home healed.

The South African Ambulance Hospital at Cannes.

CANADIAN MEDICAL MEN AND THE WAR.

One of our Canadian correspondents writes: "Medical men in Canada who are eager and anxious to go to the front read from time to time in the columns of THE LANCET of the 'dearth of medical officers' and of the dearth of medical men in the home country. They wonder how it is, when they have long since proffered their services, that it seems impossible to secure a commission, although many of them have taken emergency training to qualify them in some measure for usefulness. Up to April 1st, it has been stated, Canada had some 300 medical men in England or in France, either with the armies, in hospital service, or with the navy. Recently the University of Toronto General Hospital has gone abroad with some 40 to 50 medical men; McGill University, Montreal, has sent a similar or larger number. Queen's University, Kingston, and Laval University, Montreal and Quebec, have sent, or are sending their hospitals abroad. Lately Vancouver has offered to equip a hospital of some 1040 beds; Peterboro, Ont., one of 200 beds; Lambton County, Ontario, one of 200 beds. The Ontario Medical Council, through one of its members, Dr. Edmund E. King, Toronto, has selected some 50 or 60 medical men for the War Office. Thirty men have volunteered for service in Serbia. With all this splendid offering from the medical profession in Canada there are said to be hundreds on the waiting lists who are urgently desirous of work in any medical capacity. The provincial medical councils of Canada could yet supply several hundred men."

ITALY AND THE WAR: "THE PLEBISCITE OF THE PROFESSIONS."

From the Alps to Etna, every seat of learning and source of professional qualification (writes an Italian correspondent) has demonstrated, by word and deed, its whole-hearted sympathy with the Salandra-Sonnino administration in the policy which has placed the Third Italy by the side of the Triple Entente in the war against the Central Powers. Of the 21 universities which Italy numbers there is not one which has not declared its solidarity with the movement now in progress—mainly on the Venetian frontier and on the Adriatic seaboard—to complete the country's territorial integrity and to make meaningless the phrase "Italia Irredenta" (unredeemed Italy) and the agitation it has since 1866 inspired and justified. The last few weeks have witnessed what the leading Italian journals call "Il Plebiscito dei Professori"—a veritable plebiscite of the academic and professional interest throughout the kingdom—a "demonstration" which has reinforced, with signal unanimity and power, the various other interests, agricultural, industrial, and commercial, in baffling the Germano-Austrian diplomacy and in sending Italy, by the rupture of the ill-starred Triple Alliance, to the support of England, France, and Russia, in their antagonism to the policy whose watchword is "Deutschland über Alles."

Every Senatus Academicus has, collectively, subscribed to the manifesto organised to aid and abet the Government in its programme of intervention, and the names of the professoriate, published in full, have been for days past a feature in the leading journals. Conspicuous among these appear the signatures of the medical faculty in every school, metropolitan and provincial, and not a few of the signatories, when of the required age, have volunteered to serve at the front not only in ambulance work but, if need be, n the fighting line itself. There could not be a more significant proof of the patriotic spirit thus evoked than the correspondence that has passed between the organisers of the manifesto and such veterans in clinical and consultant practice as the leading members of the faculty at Naples and Rome, at Pisa and Bologna; and of these it may suffice to quote the letter of the illustrious pathologist of the last-named school, Professor Augusto Murri, addressed to Colonel Bernardi, director of the "Servizi Sanitari" of the local army corps.

My Honoured Colleague,—I address myself to you, in this confidential strain, to assure you, with perfect frankness, that all of us of the Clinica Medica feel it our duty to coöperate, in whatever way seems best, in the defence of Italy if she should be called upon to intervene in this war. While all my assistants are already under statutory obligation so to intervene, I have only one such call, and that is my conscience. Be it the privilege or the misfortune attaching to age, be it what you will, I must needs obey the command of conscience; and, therefore, to you my honoured colleague—to you who direct the sanitary service of our army corps—I say that, if I am not wholly without use in the service alluded to, you may count upon me to undertake, with implicit acquiescence, any duty whatever you may impose upon me—not in the higher sphere to which your kindly appreciation might tempt you to call me, but in any other, however humble. For me, as for many others, the dignity of the post is not to be measured by the nature of the work assigned to it, but by the love of our dear country, which is now claiming only that respect for her rights hitherto denied her by an unscrupulous oppressor."

This characteristic letter was addressed, as long ago as March 10th, to Colonel Bernardi, since deceased, and has been made available for publication by the courtesy of his widow. Time would fail me to quote, and the space at your disposal to publish, the volunteered undertakings of clinical teachers and consultants, inspired by equal patriotism and couched in similar language to that of the celebrated pathologist of Bologna, "the Mother of Universities." One remark, however, may be made, and it is this: that a movement so animated and so organised as that of the "Plebiscite of Italy's Professors" in this crisis of their country's destiny may not indeed command success, but must assuredly deserve it.

THE TOURING CLUB OF FRANCE AND THE WAR.—The approach of what used to be the holiday season prompts the inquiry, What has become of the touring clubs? Foremost among these, by reason of its influence, the number of its members, and the excellent service it has rendered, not least conspicuously in imposing better sanitary conditions in hotels, is the Touring Club of France. When war broke out this club had under its inspection all over Europe hotels at which members were certain of cleanliness, moderate charges, and easy redress for any legitimate grievance on reference to the club. But the war has changed all this, for many of the hotels are now converted into hospitals. So vast an organisation, however, could not remain idle, making no use of the magnificent premises secured by it for its headquarters—viz., the mansion in the Avenue de la Grande Armée once inhabited by the Humbert family, where the safe that was supposed to contain the fabulous fortune of the mythical Crawford family was kept. At this time last year this building was the centre for organising touring and exploring expeditions in all directions. Now the tourists are for the most part fighting at the front, so the Touring Club has been converted into an organisation for contributing to the health and convenience of those in the fighting line.

With the sanction and help of the Minister of War it has created a committee, known as l'Œuvre du Soldat au Front, to help soldiers at the front. Its object is to supply the soldier with necessary things which he does not obtain from the Ordnance Department. The magnificent drawing-rooms of Madame Humbert's mansion are now converted into workshops, and the Touring Club of France has succeeded in turning out no fewer than 2500 parcels a day, each containing from 25 to 30 articles. These comprise things useful in maintaining the cleanliness and the warmth of the soldier, and thus conducing to his health, things which, nevertheless, the war administration does not provide. For instance, there is a watertight hood that protects the back of the neck like a sou'-wester. There are also warm socks, woollen mittens, towels, soap, combs, hair and tooth brushes, grease for the feet, an ampoule of iodine, thread, buttons, safety pins, and a very ingenious over-shoe. This last can be made easily with any little bit of carpet or rug. It slips over the shoe to keep the feet warm while sleeping or standing still in the trenches. Then there is a powder or an ointment that is very successful in keeping away vermin. The other objects are of the nature of comforts, or even luxuries, that bear no direct relation to the question of health preservation, such as mirrors, flint tinder-boxes, candles, tobacco pouches, cigarette papers, postcards, pencils, bootlaces, jam, books, and such like.

The subscriptions paid by tourists who no longer go out touring were obviously insufficient to provide enough parcels of this description, consequently the Touring Club conceived the ingenious idea of organising throughout France the "Day of the 75." Millions of postcards, medals, and little flags were prepared recalling the great service rendered by the famous gun. These little trinkets, none of them the size of half a crown, weighed *en bloc* nearly 20 tons. They were sold for a penny and upwards and brought in no less than 5,200,000 francs. What this means may be judged by the fact that a million francs in silver 50-centime pieces weigh five tons and in 10-centime copper pieces a hundred tons. Special arrangements had to be made with the banks to deal with the huge amount of small coin thus paid for mementoes of the 75 gun. The £208,000 which an army of 5),000 ladies realised by selling 22,000,000 mementoes have

greatly helped to increase the comforts for the soldiers. But there is more money yet to come in, for the receipts from the colonies and distant places are not yet to hand, so that the tourists of France have rendered yeoman service for our common cause.

The war has not, however, compelled the Touring Club entirely to neglect the interests of the tourists. The upkeep of roads, which was a part of its business, has proved of great service for military purposes, as well as for the comfort and safety of tourists. Further, the club has begun a campaign to spread the knowledge as to where and how, without traversing the enemy's lines, advantages such as were formerly enjoyed at Homburg, Wiesbaden, Marienbad, Karlsbad, and similar places, can now be obtained. An extensive correspondence also, including many letters from England, consisting of inquiries about the French health resorts, has been conducted. It is quite certain that no English families will go this summer to either German or Austrian baths or spas. With the exception of those situated in the Vosges and the Ardennes, the resorts of France generally are available. The Touring Club urges that this affords an excellent opportunity for setting forth the superiority as regards politeness and attention that France can offer such visitors.

BELGIAN RED CROSS: WAR EXHIBITION, 1915.—A war exhibition to assist the funds of the Belgian Red Cross Anglo-Belgian Committee, of which the Queen of the Belgians is patroness, is announced to be open from June to October at the Prince's Skating Club, Knightsbridge, S.W. A 13,700 sq. ft. mural panoramic representation of Belgium will portray the beauties of Brussels, Antwerp, Bruges, Ghent, Liége, Namur, and the Valley of the Meuse, including Dinant, Louvain, Malines, Ypres, and Visé. The exhibition includes seven sections, forming a comprehensive war exhibition. Section 1: Trophies of war from the more important battle-grounds. Section 2: Armament and ammunition in the making. Section 3: Red Cross work, hospital and nursing. Section 4: Science and industry as applied to war, including the latest scientific instruments used in connexion with war. Section 5: Food and hygiene. Foodstuffs of every description for War Office requirements, for invalids, wounded, and convalescents, also hygienic preparations and apparatus. Section 6: Equipment, showing every equipment necessity of officers and men, nursing equipment for hospital and field service, working exhibits, lectures, and demonstrations. Section 7: Maritime and aerial section, comprising the latest inventions in naval and aerial warfare. Season tickets are being issued at £1 1s. each, carrying the privilege of admitting a different friend at each visit. Assistance of every kind will be welcomed by the honorary organising secretary, War Exhibition, London Chamber of Commerce, 97, Cannon-street, London, E.C.

EDINBURGH UNIVERSITY OFFICERS TRAINING CORPS MEDICAL DUTY.—On May 29th the cadets of the medical unit of Edinburgh University Officers Training Corps were inspected by Major Gray, R.A.M.C., at Kingston Grange, where the unit had fitted up a field ambulance. After a careful inspection of the field hospital arrangements and the cadets in various manœuvres, the inspecting officer addressed them, and expressed his satisfaction with what he had seen. Speaking of the value of such a unit, he said some people thought there was no good having the Officers Training Corps during war, but there was no greater possible mistake, as the essential qualification for Royal Army Medical Corps officers, apart from the medical one, was military training. Had there been no such Officers Training Corps, the Army Medical Corps at the outbreak of war would have been in difficulties. Some who had previous training rather grumbled at having to train recruits at home, yet they had done more useful work than going straight out, and they would get their chance now. Students felt that they were being blamed for hanging back and not joining a combatant unit. Nothing was more foolish. Combatant officers could be trained in a few months—for example, at Sandhurst in three—but it took five years to train a Royal Army Medical Corps officer, and should the war last a long period there would be a shortage of doctors. It was their duty to stick to their studies, taking the necessary military training in such a unit as this; ultimately they should join the Royal Army Medical Corps.

WOUNDED ALLIES RELIEF COMMITTEE.—As Dr. R. Fleming Jones, whose appointment we recorded in THE LANCET of May 8th, has been prevented from going to Serbia, the Wounded Allies Relief Committee has appointed instead Colonel Joseph A'Hearne, who has for many years been associated with the Government Medical Service of Queensland.

The committee has also appointed as medical head of its typhus hospital unit (200 beds) about to proceed to Montenegro, Dr. Gerard Carré, formerly medical officer to the Uganda Relief Expedition, and senior medical officer to the Fashoda Expedition. The medical staff will also include Dr. Isabel Ormiston, Dr. C. B. Slater, and Dr. Lillias Hamilton. Miss Elkington is matron and there are 14 nurses and one male nurse attendant. Another matron with five nurses will follow later.

SCOTTISH COMMAND: MEDICAL SERVICES.—Colonel J. D. Mackintosh, Assistant Director of Medical Services 2/1st Lowland Division, in addition to other duties, has been appointed to supervise the administration and organisation of all military, war, and Territorial general hospitals in the Glasgow area. Major H. A. Leebody, from Officer Commanding 2/3rd Lowland Field Ambulance, to be Deputy Assistant Director of Medical Services, Scottish Command, dated March 5th, 1915.

NEW MILITARY HOSPITALS.—The military authorities are taking over for a military hospital the Western District Hospital, Possil-road, Glasgow, which is a modern and well-equipped institution with accommodation for 250. —The Lanarkshire Red Cross Society, through its President, the Duchess of Hamilton, has been authorised by the War Office to take over for a hospital the new school buildings at Gateside, Cambuslang.—The Devonport Workhouse has been taken over by the War Office and will be converted into a military hospital for wounded soldiers. The infirmary, which contains 150 beds, will be used immediately, and in about three weeks it is expected that the workhouse will be fitted up for the accommodation of about 400 additional patients.

RURAL MEDICAL RELIEF IN SERBIA.—Owing to the heavy death-rate from typhus fever among the Serbian medical profession and the absorption of the remainder in military and fever hospitals in towns, the rural population is entirely deprived of medical aid. Mrs. St. Clair Stobart describes in the *Morning Post* of May 25th how in an effort to aid them a hospital tent was planted on the road between Kragujevatz and Belgrade, with a notice in Serbian that medicine and advice would be given gratis to those who attended and brought their own bottles. The success was instantaneous, and over 500 patients are reported as having been treated during the first week, having trudged from their villages even so far as 50 miles away. The authorities have now given permission for a series of these roadside dispensaries, along the main road, administered from the Women's Tent Hospital, to be established, each such unit to consist of a woman doctor, two nurses, an interpreter, a chauffeur, and a handyman. The staff will live in tents and attend to their own sanitation, which will have an educative effect also on the peasantry. The expenses of outfit and three months' maintenance are about £1000 for each unit, and it is desired to start six units as early as possible. Mrs. Stobart says: "From the humane point of view alone it is inconceivable that money could be better spent than upon these brave and patient peasants who are suffering from a foe against whom they have no weapons of defence. Villages are being decimated, whole families blotted out, and horrors unspeakable are being endured by these peasants without complaint, because they take it as their share of the sacrifices which have to be made by the whole nation in the cause of Freedom. But it is a heavy price to pay, and it is impossible to watch it being paid without attempting to lessen even to a small degree the horrible toll of suffering." Donations marked for the Stobart Dispensaries will be gladly received by the treasurer of the Serbian Relief Fund, 55, Berners-street, London, W.

Dr. Fabian Ware and Dr. Oswald Kelly, chief medical officers of mobile units of the British Red Cross serving with the French Army, have been mentioned in French Army orders for conspicuous devotion to duty.

SCOTTISH WOMEN'S FIRST AID CORPS.—The annual meeting of the Scottish Women's First Aid Corps was held in the Synod Hall, Edinburgh, on May 28th, Mrs. Maxtone Graham, the corps commandant, presiding. Miss M. E. Macmillan, honorary secretary, read the annual report, which stated that the corps was started six years ago in order to train women to be in readiness to render help to the wounded in the event of war. The scheme was justified, said the report, by the large number of competent trained women who were ready to serve when the war broke out. Since April, 1914, 219 new members had joined, and the corps now numbered 356, and, in addition, about 300 non-members had taken advantage of their classes. A house lent by Mr. Frank Deas in Magdala-place had been equipped and furnished by members of the corps as a special corps hospital. It was now occupied by wounded soldiers, was recognised by the Scottish Command, and received the capitation grant. Mrs. Graham referred to the progress made by the corps during the year, and remarked that their hospital was a kind of visible outcome of what they had been doing. The honour of the corps was in the hands of the members, who must do everything they could to make the hospital a success. They had been getting soldier patients from the City Hospital and from the Deaconess Hospital, and she was sure that so long as they kept the hospital open it would never be empty. They got the capitation grant from the Government, but that was not sufficient to keep the hospital going, and they would require to raise more funds.

KITCHENER'S INDIAN HOSPITAL.—Tents to accommodate 500 more beds are being put up to augment the accommodation of this hospital, which was fully described in THE LANCET of April 3rd. The staff consists of 37 officers of the Indian Medical Service, mostly from three Indian general hospitals, and some had to give up lucrative appointments to serve in Kitchener's Hospital. There are also 15 Anglo-Indian assistant surgeons, 30 native sub-assistant surgeons, 150 sepoy ward orderlies, 100 native followers, and 75 British orderlies of the R.A.M.C.

COLLABORATION IN OPERATIVE SURGERY.—A medical correspondent, signing himself "Observer," writes that he was recently an eye-witness of operations at the Royal Military Hospital, Devonport, illustrating the possibility of collaboration in surgical operations. The operations, he says, were for the radical cure of bilateral inguinal herniæ by Bassini's method. Two operators took part, one on either side. The initial incisions were simultaneous. Both operations, though varied in technique, proceeded *pari passu;* and the last skin suture in each was inserted simultaneously to a second. The only point for discussion (that of dressings or no dressings) was harmoniously compromised, and the patient is doing well, the period of anæsthesia and the shock of operation being both reduced by half. Such an illustration speaks highly for surgical collaboration. Here skill met skill, not as "Greek meets Greek," but as allies in a hallowed cause. No small credit, too, is due to the sister who supplied both operators synchronously and speedily with their varied armamentarium.

ALLEGED ROBBERIES OF THE WOUNDED BY MEDICAL ORDERLIES.—There has been not a little direct accusation levelled in various newspapers against medical orderlies of petty thieving practised on the wounded during transport. One very specific instance in the *Times* of May 28th has drawn forth from Colonel P. Broome Giles, of the City of London Branch of the Red Cross Society, a very trenchant and just reply. After referring to the difficulties that lead to defective packing of kits upon ambulances, illustrated by a singular instance, he calls attention to the *primâ facie* unlikelihood of the charge from the general position and character of those engaged in the transport work, and concludes: "If your correspondent will furnish me with (1) the date; (2) the hour; (3) the hospital the officer was taken to, I can verify from the duty roll those she implicates, and will give her every facility to make an exhaustive inquiry, after which she can either publicly substantiate her accusation or apologise." That many articles are lost during transport is highly probable, and it is difficult to conceive how it could be otherwise when all attendant circumstances are taken into consideration, so that it is quite gratuitous to propound as the only explanation a highly improbable system of thieving.

INCORPORATED SOLDIERS' AND SAILORS' HELP SOCIETY.—This society held its annual meeting on May 26th, when the secretary, Major Tudor Craig, said that over 23,000 beds had been presented to convalescent homes by the members of the society since the war began. The Princess Christian Home at Brookwood was also to be turned into a convalescent home, and the accommodation at the Naval Hospital had been increased to 128 beds. Princess Christian said that the necessary funds had been offered by a friend through the Queen and herself, and she thought that the extension would remain permanently at the hospital. The secretary continued that a fund in memory of Lord Roberts had been instituted to enable the partially disabled to be dealt with. The Cordwainers' Company would give disabled men 42 weeks' training in cobbling, the society making them meanwhile an allowance. The National Fund had helped with a grant of £35,000.

A MILITARY CHAMBER OF HORRORS.—The Royal United Service Institution have expressed approval of a suggestion of Dr. Raymond Crawfurd that a "chamber of horrors" should be established in the museum of the institution for the display of a collection of objects testifying to the commission of atrocities in warfare, such as German military proclamations, letters and diaries ordering or recording atrocities, the Botha correspondence on the infection and poisoning of wells, German gas apparatus, incendiary pastilles, and the like. The War Office is considering the matter.

Sir George Newman, principal medical officer of the Board of Education, has been appointed on the Central Control Board (Liquor Traffic) created by the Government to deal with the drink problem in relation to munitions, transport, and camp areas. The address of the Board is 76, Strand, London, W.C.

Medical News.

UNIVERSITY OF LONDON.—At the third M.B., B.S. Examination for internal and external students, held recently, the following candidates were successful:—

Lilian Annie Clark and *Dora Challis Colebrook (honours), London (Royal Free Hospital) School of Medicine for Women; †Clement Cooke, St. Bartholomew's Hospital (honours); Herbert Davies, University College Hospital; Robert Hood Fleming, B.Sc., Middlesex Hospital; Norah Hamill and Mary Emmeline Joll, London (Royal Free Hospital) School of Medicine for Women; William Edward Kingdon, University College Hospital; Olive Gertrude Mary Langmead, London (Royal Free Hospital) School of Medicine for Women; Stylianos George Papadopoulos, St. Bartholomew's Hospital; George Henry Roberts, St. Thomas's Hospital; Gabriel Francis Rodrigues, University College Hospital; Farid Henein Abdel Sayed, St. Mary's Hospital; Hilda Mary Scarborough, London (Royal Free Hospital) School of Medicine for Women; John Frank Herbert Stallman, Guy's Hospital; and Katharine Ada Waring, London (Royal Free Hospital) School of Medicine for Women.

* Distinguished in Midwifery and Diseases of Women.
† Distinguished in Medicine.

CENTRAL MIDWIVES BOARD.—Special meetings of the Central Midwives Board were held at Caxton House, Westminster, on May 26th and 27th, Sir Francis H. Champneys being in the chair. A number of midwives were struck off the roll, the following charges amongst others having been brought forward: Not being scrupulously clean in every way as required by Rule E.1; that when attending patients the midwife did not take with her the appliances or antiseptics required by Rule E.2, and consequently was unable to comply with the provisions of Rules E.3 and 7; not taking and recording the pulse and temperature of patients as required by Rule E.13; the midwife employing an uncertified person to visit the patient as her substitute in contravention of Section 1 (4) of the Midwives Act, 1902. Neglecting without reasonable cause to attend a patient on the day of the confinement in spite of repeated messages, and not arriving until after the delivery had taken place; that notwithstanding instruction by the inspector of midwives the midwife did not make use of a clinical thermometer, nor did she take the pulse of her patients, and consequently did not comply with Rule E.13.

That in contravention of Section 10 of the Midwives Act, 1902, a midwife practised as a midwife in 1915 without having notified the local supervising authority of her intention to do so. Not always attending patients for a period of ten days following labour, as required by Rule E.11; not keeping a register of cases as required by Rule E.23; when attending patients the midwife did not wear a clean dress of washable material, as required by Rule E.1, and that in cases where the advice of a registered medical practitioner had been sought she neglected to notify the local supervising authority thereof, as required by Rule E. 21 (1). —An application from the examiners of the Manchester Centre asking the Board to arrange for examinations to be held six times a year alternately at Manchester and Liverpool was granted. The Board decided that the Brighton Hospital for Women should be reinstated upon the list of institutions at which pupils may be trained on the annual approval by the Board of their lecturing staff and training midwife. Letters were considered from the medical officer of health of Sheffield and from the county medical officer of health of Lancashire inquiring whether a rupture of the perineum is to be considered "serious" within the meaning of Rule E. 20 (3) in every case where stitching is required. The Board decided that any case of a ruptured perineum which required stitching was a case of "serious rupture" within the meaning of the rule.

THE TYRONE MEDICAL COMMITTEE.—At a meeting of medical men, held in Dungannon, Dr. E. C. Thompson (Omagh), President of Tyrone Medical Committee, in the chair, it was decided to write to those Tyrone doctors who had accepted positions as "half-time certifiers" under the Insurance Act, requesting them to fulfil their pledges to the Tyrone Medical Committee and resign their positions, and stating that, in case of refusal, upon the first occasion on which an offender visited the patient of another medical practitioner an application would be made to his College to have his licence as a practitioner cancelled. It was also decided that the medical officers of the various Poor-law unions should press for four weeks' vacation each year and that the locum-tenents be paid £4 4*s.* per week, and each medical practitioner was requested not to accept less. It having been mentioned that Dr. E. C. Thompson, surgeon to the Tyrone County Infirmary, Omagh, had been removed from the position as medical adviser for co. Tyrone under the Employers' Liability Act, which he had held since 1896, and another doctor appointed, it was decided to ask for an explanation from those in authority why Dr. Thompson without notice or explanation had been removed from the post.

MIDDLESEX HOSPITAL.—Presiding over the quarterly meeting of the Court of Governors of the Middlesex Hospital on May 27th, Sir Henry Morris referred to the valuable results which were expected from the electro-cardiograph department of the hospital. The report stated that since the beginning of the war 301 soldiers of the Expeditionary Force had been treated in the hospital, while at the branch institution at Clacton-on-Sea 1432 wounded soldiers had been treated.

THE MONTESSORI SYSTEM. — Speaking at a meeting of the Montessori Society, held at University College on May 22nd, Mr. C. W. Kimmins, D.Sc., Chief Inspector of Education to the London County Council, said that children who had been educated under the Montessori system were about a year in advance of others who had received ordinary methods of instruction. The children were more resourceful and easily overcame the difficulties of unseen work. Dr. Kimmins warned his audience against introducing new methods without adequate preparation.

THE ROYAL SOCIETY.—The meetings of the Royal Society previously announced for June 10th and 24th will not be held.

THE death is announced of Mr. J. P. Martin, L.R.C.P., L.R.C.S. Irel., the medical officer of No. 1 West District, Liverpool. Mr. Martin, who was greatly endeared to the poor of the Great Mersey-street district, where he lived, had a wide circle of friends and was a generous supporter of Liverpool charities.

Appointments.

Successful applicants for vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week, such information for gratuitous publication.*

BAKER, LILY, F.R.C.S. Irel., M.B., Ch.B. Irel., has been appointed a temporary Demonstrator in Obstetrics and recognised Teacher in Ophthalmology, Laryngology, and Otology at the Bristol University.

BARNES, HELEN PATRICIA, M.B., B.S. Lond., has been appointed Resident Obstetric Officer and Ophthalmic House Surgeon at the Bristol Royal Infirmary.

BEVERS, E. C., M.B., B.Ch. Oxon., F.R.C.S. Eng. & Edin., has been appointed Surgeon to the Radcliffe Infirmary and County Hospital, Oxford.

BIGGART, A. S. L., M.B., Ch.B. Edin., has been appointed Medical Officer to the Hartlepools Sanitary Authority.

CHITTY, HUBERT, M.B., M.S. Lond., F.R.C.S. Eng., L.R.C.P. Lond., has been reappointed Assistant Curator of the Pathological Museum, Bristol University.

CROSSE, REGINALD EDWARD, M.R.C.S., L.R.C.P. Lond., has been appointed one of the Medical Referees under the Workmen's Compensation Act, 1906, for County Court Circuit No. 47, to be attached more particularly to the Greenwich and Woolwich County Courts.

FORTESCUE-BRICKDALE, J. M., M.D., Ch.B. Oxon, has been reappointed Director of the Public Health Laboratory at the Bristol University.

JAMIESON, THOMAS MITCHELL, L.R.C.P. & S. Edin., L.F.P.S. Glasg., has been appointed Medical Officer for the Western District by the Plymouth Board of Guardians.

JONES, W. BLACK, M.D., B.S. Lond., D.P.H., has been appointed Medical Officer of Health for the Combined Rural Districts of Builth and Colwyn and for the Urban District of Builth; also Medical Officer and Public Vaccinator for the Lower District of the Builth Union.

MOORE, J. P., M.B., B.S. R.U.I., has been appointed Medical Officer of the Camolin Dispensary District of the Gorey Union.

MORRIS, LEONARD N., M.B., B.Ch. Bristol, has been reappointed Assistant Curator of the Pathological Museum, Bristol University.

NIXON, JOHN A., M.B., B.C. Cantab., F.R.C.P. Lond., has been re-appointed Deputy Dean of the Faculty of Medicine at Bristol University.

PEDLOW, T. B., M.B., B.S. R.U.I., has been appointed Certifying Surgeon under the Factory and Workshop Acts for the Lurgan District of the county of Armagh.

RYAN, PERCEVAL CECIL HARDINGE, M.D., B.Ch. Dub., has been appointed Deputy Medical Officer for the Fourth District of the Chipping Sodbury (Gloucestershire) Union.

SAYEED, A. L., M.B., Ch.B. Edin., has been appointed Assistant Medical Officer at the St. Mary's Infirmary, Highgate-hill, N.

SHED, A. B., M.B., Ch.B. Edin., D.P.H., St. And., has been appointed Assistant County Medical Officer to the Hants County Council.

SKEEN, JAMES H., M.B., C.M. Aberd., has been appointed Medical Superintendent of Fife and Kinross Asylum at Springfield.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).
When the application of a Belgian medical man would be considered the advertisers are requested to communicate with the Editor.

BARNSLEY COUNTY BOROUGH.—Assistant Tuberculosis Officer and Resident Medical Officer at Mount Vernon Sanatorium. Salary £300 per annum, with board and residence.

BATH, WINSLEY SANATORIUM FOR CONSUMPTION.—Assistant Resident Medical Officer. Salary £150 per annum, with board, residence, and laundry.

BETHNAL GREEN INFIRMARY, Waterloo-road, N.E.—Assistant Medical Officer. Salary at rate of £280 per annum, with apartments, board, and washing.

BIRKENHEAD BOROUGH HOSPITAL.—Female Senior and Junior House Surgeons. Salary £180 and £150 per annum respectively, with board and laundry.

BIRMINGHAM CORPORATION CITY HOSPITAL, Lodge-road.—Temporary Female Assistant Resident Medical Officer. Salary £250 per annum, with board, residence, and washing.

BIRMINGHAM GENERAL DISPENSARY.—Resident Medical Officer, unmarried. Salary £250 per annum, with apartments, attendance, &c.

BIRMINGHAM, ROMSLEY HILL SANATORIUM FOR CONSUMPTIVES.—Assistant Resident Medical Officer, unmarried. Salary £250 per annum, with board, apartments, and laundry.

BOLTON INFIRMARY AND DISPENSARY.—Third House Surgeon. Salary £170 per annum, with apartments, board, and attendance.

BRADFORD EDUCATION COMMITTEE.—Assistant School Dentist. Salary £300 per annum.

BRISTOL, BISHOP'S KNOLL HOSPITAL (2ND SOUTHERN GENERAL HOSPITAL), Stoke Bishop.—Surgeon in Residence. Salary £250 per annum, with board, lodging, and laundry.

BRISTOL GENERAL HOSPITAL.—House Surgeon and Second House Physician, both for six months. Salary at rate of £150 per annum, with board, residence, &c.

BRISTOL ROYAL INFIRMARY.—Throat, Nose, and Ear House Surgeon for six months. Salary at rate of £120 per annum, with board, apartments, and laundry.

BURY INFIRMARY.—Senior and Junior House Surgeons. Salary £175 and £150 per annum respectively, with board, residence, and washing.

BUXTON, DERBYSHIRE, DEVONSHIRE HOSPITAL.—Assistant House Physician for six months. Salary £100 per annum, with apartments, board, and laundry.

CAMBRIDGE, ADDENBROOKE'S HOSPITAL.—Honorary Assistant Surgeon for Ear, Nose, and Throat Department. Also Honorary Assistant Surgeon for Ophthalmic Department.

CANTERBURY MENTAL HOSPITAL.—Locum Tenent Assistant Medical Officer for six weeks. Salary £6 6s. per week, with board, lodging, washing, and attendance.

CARLISLE NON-PROVIDENT DISPENSARY.—Resident Medical Officer. Salary £200 per annum, with apartments (not board).

CITY OF LONDON LYING-IN HOSPITAL, City-road, E.C.—Resident Medical Officer. Salary £5 5s. per week, with board, lodging, and washing.

COVENTRY AND WARWICKSHIRE HOSPITAL.—House Surgeon. Salary as arranged.

DARLINGTON COUNTY BOROUGH INSURANCE COMMITTEE.—Two Medical Practitioners.

EDINBURGH, ROYAL ARMY MEDICAL CORPS DEPÔT, Easter-road Barracks.—3RD LOWLAND FIELD AMBULANCE: Commissions.

EVELINA HOSPITAL FOR SICK CHILDREN, Southwark, S.E.—House Physician for five months. Salary at rate of £75 per annum, with board, residence, and washing.

FOLKESTONE, ROYAL VICTORIA HOSPITAL.—House Surgeon. Salary as agreed, with board, residence, and laundry.

GENERAL LYING-IN HOSPITAL, York-road, S.E.—Resident Medical Officer for three months. Salary £50 per annum, with board.

GLASGOW, ANDERSON COLLEGE OF MEDICINE, Dumbarton-road.—Chair of Anatomy.

HAMPSTEAD GENERAL AND NORTH-WEST LONDON HOSPITAL.—Resident Medical Officer for six months. Salary at rate of £200 per annum, with board, residence, and laundry.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton.—House Physician for six months. Salary 30 guineas. Also Assistant Resident Medical Officer. Salary £100 per annum, with board and residence.

MACCLESFIELD GENERAL INFIRMARY.—Resident Medical Officer. Salary £150 per annum, with board and residence.

MANCHESTER CORPORATION, BAGULEY SANATORIUM.—Superintendent. Salary £400 per annum, with house, coal, light, and washing.

MANCHESTER COUNTY ASYLUM, Prestwich.—Locum Tenens. Salary 6 guineas per week.

MANCHESTER HOSPITAL FOR CONSUMPTION AND DISEASES OF THE THROAT AND CHEST, Bowdon, Cheshire.—Resident Medical Officer for In-patient Department. Salary £100 per annum, with board, apartments, washing, &c.

MANCHESTER NORTHERN HOSPITAL FOR WOMEN AND CHILDREN, Parkplace, Cheetham Hill-road.—House Surgeon. Salary £120 per annum, with apartments and board.

METROPOLITAN EAR, NOSE, AND THROAT HOSPITAL, Fitzroy-square, W.—House Surgeon. Salary £150 per annum. Also Honorary Anæsthetist.

MIDDLESEX HOSPITAL, W.—Officer-in-Charge of Electrocardiograph Department. Salary £50 per annum.

MONTENEGRO.—Assistant Doctor for Unit of 200 beds. Salary according to experience, and expenses.

NORTHAMPTON COUNTY BOROUGH.—Temporary Clinical Tuberculosis Officer. Salary £350 per annum.

NORTHUMBERLAND COUNTY.—Assistant School Medical Inspector. Salary £300 per annum.

NORTHUMBERLAND COUNTY COUNCIL.—Temporary Clinical Tuberculosis Medical Officer. Salary 7 guineas a week.

NOTTINGHAM CHILDREN'S HOSPITAL.—Female House Surgeon. Salary at rate of £150 per annum, with apartments, board, and washing.

NOTTINGHAM GENERAL HOSPITAL.—Senior House Physician and Assistant House Physician. Salary at rate of £300 and £250 per annum respectively, with board, residence, and laundry.

PLYMOUTH, SOUTH DEVON AND EAST CORNWALL HOSPITAL.—House Surgeon. Salary as arranged, with board, residence, and washing.

PORTSMOUTH CORPORATION MENTAL HOSPITAL.—Assistant Medical Officer. Salary £250 per annum, with board, apartments, attendance, and washing.

PORTSMOUTH ROYAL HOSPITAL.—House Surgeon for six months Salary £150 per annum, with board, &c.

ST. MARY'S HOSPITAL FOR WOMEN AND CHILDREN, Plaistow, E.—Assistant Resident Medical Officer. Salary at rate £90 per annum, with board, residence, and laundry.

SALISBURY GENERAL INFIRMARY.—House Surgeon and Assistant House Surgeon, unmarried. Salary £150 and £100 per annum respectively, with apartments, board, lodging, and washing.

SHEFFIELD, JESSOP HOSPITAL FOR WOMEN (GYNÆCOLOGICAL AND MATERNITY DEPARTMENTS).—Female Junior House Surgeon, unmarried. Salary £80 per annum, with board, residence, and laundry.

SHEFFIELD ROYAL INFIRMARY.—House Surgeon and Assistant House Physician. Salary £100 per annum, with board and residence.

SHEFFIELD, WHARNCLIFFE WAR HOSPITAL, Middlewood-road.—Resident Medical Officers.

SINGAPORE, STRAITS SETTLEMENTS.—Resident Medical Superintendent for Infectious Diseases Hospital. Salary 4200 dollars for first, 4500 dollars for second, and 4800 dollars for third year, with free quarters.

SOUTHAMPTON, PARISH INFIRMARY, Shirley Warren.—Resident Assistant Medical Officer. Salary £250 per annum, with apartments, rations, washing, and attendance.

SOUTHWARK UNION INFIRMARY, East Dulwich-grove, S.E.—Assistant Medical Superintendent. Salary at rate of £250 per annum, with board, apartments, and washing.

STOCKPORT INFIRMARY.—Senior House Surgeon. Salary £200 per annum, with board, washing, and residence.

SWANSEA GENERAL AND EYE HOSPITAL.—House Physician. Salary £125 per annum, with board, apartments, and washing.

TINGWALL, WHITENESS, AND WEISDALE PARISH.—Medical Officer and Public Vaccinator. Salary £45 per annum.

TUNBRIDGE WELLS GENERAL HOSPITAL.—House Surgeon, Liberal salary, with board, residence, &c.

VENTNOR, ROYAL NATIONAL HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Isle of Wight.—Assistant Resident Medical Officer.

WAKEFIELD COUNTY BOROUGH INSURANCE COMMITTEE.—Two Medical Practitioners.

WALSALL AND DISTRICT HOSPITAL.—Assistant House Surgeon and Anæsthetist. Salary £150 per annum, with board, residence, and laundry.

WEST BROMWICH AND DISTRICT HOSPITAL.—House Surgeon and Assistant House Surgeon, unmarried. Salary £150 and £120 per annum respectively, with residence, board, and laundry.

WESTERN GENERAL DISPENSARY, Marylebone-road, N.W.—Honorary Ophthalmic Surgeon.

WEST HAM AND EASTERN GENERAL HOSPITAL.—Resident Medical Officer. Salary £160 per annum. Also House Physicians. Salary £120 and £100 per annum, with board, residence, and washing.

WIGAN, ROYAL ALBERT EDWARD INFIRMARY AND DISPENSARY.—Junior House Surgeon. Salary £150 per annum, with board, apartments, and washing.

WILLESDEN ISOLATION HOSPITAL.—Temporary Resident Medical Officer. Salary £6 6s. per week, with board and lodging.

WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL.—Resident Medical Officer and House Surgeon for six months. Salary at rate of £150 per annum, with board, rooms, and laundry.

WORCESTER GENERAL INFIRMARY.—Resident Medical Officer. Salary £150 per annum, with board, residence, and washing.

WREXHAM INFIRMARY.—Resident House Surgeon. Salary £125 per annum, with board, lodging, and washing.

THE Chief Inspector of Factories, Home Office, London, S.W., gives notice of vacancies for Certifying Surgeons under the Factory and Workshop Acts at Leigh, in the county of Lancaster; and at Alford, in the county of Lincoln.

Births, Marriages, and Deaths.

BIRTHS.

BLACK.—On May 29th, at Tullymore Park, Newcastle, Co. Down, the wife of Major Barclay Black, R.A.M.C., of a daughter.

CLARKE.—On May 26th, at Prince's-gate, the wife of Lieutenant K. B. Clarke, R.A.M.C., of a daughter.

GINNER.—On May 4th, at Southport, to Dr. and Mrs. Wightman Ginner, of Cannes and Contrexeville, a daughter.

TRAVERS.—On May 30th, at Phillimore-gardens, W., the wife of Ernest Travers, M.D. Lond., of a son.

WRIGHT.—On May 25th, at Nithsdale House, Boston, Lincs., the wife of W. E. Merle Wright, F.R.C.S. Edin., of a daughter.

MARRIAGES.

FISHER—STENHOUSE.—On June 1st, at St. Giles's Cathedral, Edinburgh, Edward F. Fisher, M.B., F.R.C.S., Surgeon, Royal Navy, to Nancy, elder daughter of Mr. and Mrs. Stenhouse.

ORLEBAR—BORRER.—On June 1st, at the Chapel Royal, Savoy, Jeffery Alexander Amherst Orlebar, Lieutenant, R.A.M.C., to Margaret Frances Hamlyn, only daughter of William Borrer, of Pakyns Manor, Sussex.

ROSS—DANIEL.—On May 25th, at Portishead Parish Church, Andrew T. Ross, M.D., F.R.C.S., Lieutenant, R.A.M.C., to Kathleen, youngest daughter of Major J. F. R. Daniel, V.D., of Fircliff, Portishead.

DEATHS.

GUINNESS.—On May 25th, at Mount Hermon, Sydenham Hill, H. Grattan Guinness, M.D., aged 53 years.

HAY.—On May 26th, at Edinburgh, Surgeon-General George William Robertson Hay, I.M.S. (retired).

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

BOOKS, ETC., RECEIVED.

ARNOLD, EDWARD, London.
A Manual of Gynæcology for Students and Practitioners. By Samuel J. Cameron, Assistant to Regius Professor of Midwifery, University of Glasgow. Price 18s. net.

BRITISH OPTICAL ASSOCIATION, Clifford's Inn, London, E.C.
British Optical Association Year Book. By J. H. Sutcliffe, F.B.O.A. Price 5s.

CHURCHILL, J. AND A., London.
Principles of Human Physiology. By Ernest H. Starling, M.D. Lond., F.R.C.P., F.R.S., Jodrell Professor of Physiology in University College. Second edition. Price 21s. net.

MILFORD, HUMPHREY, London, New York, Melbourne, and Bombay.
Heredity and Environment in the Development of Man. By Prof. Edwin Grant Conklin (Princetown University). Norman W. Harris Lectures, 1914. Price 8s. 6d. net.
A Hausa Phrase Book, with Medical and Scientific Vocabularies. By Allan C. Parsons, W.A.M.S. Price 7s. 6d. net.

PANINI OFFICE, Allahabad.
The Dietetic Treatment of Diabetes. By B. D. Basu, Major I.M.S., retired. Fifth edition, revised and enlarged. Price Rs.1.8.

PHARMACEUTICAL PRESS, London.
Pharmaceutical Pocket Book for Practitioners and Students. Edited by J. Humphrey, Ph.C., F.J.I. Fifth edition. Price 1s. 6d. net.

PUTNAM'S, G. P., SONS, London and New York.
Field Hospital and Flying Column. Being the Journal of an English Nursing Sister in Belgium and Russia. By Violetta Thurstan. Price 2s. 6d. net.
In Hoc Vince: The Story of the Red Cross Flag. By Florence Barclay.

RIDER, WILLIAM AND SON, London.
Nerve Control: The Cure of Nervousness and Stage-fright. By H. Ernest Hunt. Price 1s. net.

WATTS AND CO., London.
Morale, Fondée sur les Lois de la Nature. By M. Deshumbert.

Notes, Short Comments, and Answers to Correspondents.

MEDICAL FEES, ETC., IN THE SIXTEENTH AND SEVENTEENTH CENTURIES.

AMONGST the historical documents belonging to the Duke of Rutland preserved at Belvoir Castle are a number of household account books of various dates ranging from the year 1522 to the year 1700. These are of much interest as illustrating the stately housekeeping of a wealthy noble family in the sixteenth and seventeenth centuries. The accounts throw light on local and family history, social customs, the manner of living, food, drink, the history of prices, trade, amusements, costume, and innumerable other subjects. Entries of payments for tobacco and pipes, the price of the former sometimes running very high, show how esteemed the custom of smoking was among the nobility. The accounts also indicate that in 1670 tea was regarded as a necessary part of the Earl of Rutland's equipment for a journey in England. On May 6th of that year, for instance, we find a charge of 8*d.* "for a box of tin to keepe his Lordshipp tea in coole for his journey," and on Nov. 20th of the same year there is the entry, "for ½ a pound of tea for his Lordshipp, 10*s.*" Subjoined are a few examples of payments recorded to physicians and apothecaries and other items of expenditure of direct or remote medical interest:—

1528.—Payde, be my Lorde's comaundement, to Doctor Freman, fysicion, xl*s.*

1530.—Item, to Doctor Freman, fusician, x*s.*—To Doctor Freman, fusician, for his paynes with my Lorde Ros, xx*s.* Item, to Doctor Bartlott, by my Lorde's commaundement, vij*s.* vj*d.*—Item, to Peerson the poticary for divers restoretyffes, vij*s.* iiij*d.*

1532.—Item, geven in rewarde to the myddewif and norys at the christenynge of Master Hervie's childe, xx*s.*

1533.—Item in reward, the xij day of *Julii*, to Roger Smyth, poticarye, for his payne takyn with my Lord in his fevir, vij*li.* xiij*s.* iiij*d.*; to him for such stuff as he spent abowt my Lord in the tyme of his sekenesse, xxxij*s.* x*d.*—Item in reward at the same tyme to Doctor Bartlet, xxx*s.*—Item in reward to Doctor Freman the same tyme, xiij*s.* iiij*d.*—Item to a woman phicisian at Bingeham in the Vale, iij*s.* vj*d.*—Item to Roger Smyth, poticary, for my doughter Anne, iij*s.* iiij*d.*

1536.—Item to Doctor Clement for lokyng to my Lorde Roos when he was seke at Endfyld, xxx*s.*—Item to the same doctor at another tyme at Yorke Place, x*s.*

1537.—Item in reward to Master John the poticary for ij glasses of oyle of almons and for a medicen for my Lorde's childern for the wormes at ij tymes, x*s.* x*d.*

1540.—Paide in reward to Doctor Bill commyng to my Lorde at Halywel, xx*s.*—Item payd to Doctor Edwardes for his reward, beyng with my Lord Roos at Croxton in his sekeness, and for his costes goyng to Cambrige for ix days at vj*s.* viij*d.* the day, iij*li.*

1541.—Item, the xxvijth day of February, to Mr. Leveret, the phesicion, for that he came to my Lady then and tarried at Belvoier iij days, x*s.*—Item, gyven in rewarde to Mr. Edwardes, phisicion, of Newarke, for his comyng to se Maistres Margaret Paston when she was seke, v*s.*—Item, gyven in reward to Mr. Leverett for mynystryng medecyns to my Lord Roose when he was seke, x*s.*; and for the like mynystryng to Maistres Margaret Paston in her sekenes, xxii*s.* vj*d.*—Item, payd for a pynte of aquawyte, xij*d.*

1542.—Gevyn to Doctor Augustyne at dyverse tymes (over and beside iiij*li.* x*s.* in the price of a gowne of damask) lxxv*s.*—Gevyn to Doctor Buttes, xxij*s.* vj*d.*—Gevyn to Doctor Nicholas at dyverse tymes, viij*li.* x*s.* x*d.* Gevyn to Doctor Crome at dyverse tymes (over and beside xj yardes of damask for a gowne, price iiij*li.* x*s.*), lxxvij*s.* xj*d.*—Gevyn to Docter Bill at ij tymes, xl*s.*—Gevyn to Mr. Oliff, the Kinge's surgian, at diverse tymes (over and beside xj yardes of damask for a gowne, price iiij*li.* ij*s.* vj*d.*) vij*li.* xiij*s.* vj*d.*—Paid by Anthony Digby for ypocras when my Lorde was syke, vj*s.* viij*d.*

1543. (Account of the executors of the will of Thomas, Earl of Rutland re funeral expenses, &c.)—For the charges of the stufe that was occupied about the searing of the corps, and to the surgion for his penes, as apperithe by Thomas Disney's booke, xiij*s.*; to the plummer for puttying the corps in lead, xiij*s.* iiij*d.*; to Docter Wendy for his paynes takyng about the seid Erle in his siknes and after, contyneyeng there by the space of ij days, vj*li.* iij*s.* x*d.*

1551.—Item to Doctour Wotton for his counsaile in phisik to my Lord, x*s.*—Item to Goldring the potecary for marmalad and other thinges, x*s.*

1554.—Item to Docter Hyll, xx*s.*—Item to Docter Wooton, the same daie, x*s.*—Item to Holland the surgion, the same daie, iij*s.* iiij*d.*

1555.—Item in reward to John Rolpotey, my Lord's surgoin, by his commaund, xl*s.*—Item, by my Lorde's commaund, to the straunger that ys his surgion, x*s.*

1558.—Item to Doctor Peter and Doctor Hil at iij several times for their coming to my Lady, xxvj*s.* viij*d.*

1559.—Item paid for cariage of Bukston's water sent to my Lord of Penbrok, iiij*s.* iiij*d.*

1590.—Item geven at the christenyng of Mr. Bassete's daughter, to mydwief and nurse, xx*s.*

1594.—Paid to Mr. Docter Hunton and Mr. Harrye Webster for commynge to Belvoyre to her Ladyship, xxx*s.*—Paid to George Sandwith, barber, for commynge to Belvoyre ij severall tymes to tryme his Lordship, v*s.*

1598.—Item for two bezer stones, vj*li.*

1599.—Item geven to Doctour Marbeck for the waters and phesicall thinges sent towardes Ireland, and for his paynes in providing them, xl*i.*—Item geven to Mr. Goodrous, her Majeste's sergeant chirurgian, whom she sent to my Lord, vl*i.*—Item geven to Mr. Thorne, chirurgian, vj*li.* xiij*s.* iiij*d.*—Item to Mr. Doctour Marbeck for his half yeares anuytie due at Our Lady Day, iij*li.* vj*s.* viij*d.* Item paied to the apothecary for phisick for Capten Whitlock, xxvj*s.*; and geven to Doctour Marbeck for his paynes about the Capten in his sicknes, by his Lordship's commandment, vl*i.*

1600.—Item in rewarde to Doctour Marbeck for certen waters and other thinges which he bought and provided for my Lordes use in his jorney into Holland, and for his paynes, xl*i.*

1604.—Paid to Mr. Docter Hunton in rewarde commyng to my Lady iij*li.*, and to John Lucas his potticarie, xl*s.*—Paid to Mr. Docter Mumforde for commyng from London to mynister phissicke to mye Ladye, xvl*i.*

1605.—Item, to Mr. Perk for letting his Lordship's blood, xxx*s.*

1606.—Item, to Sir Walter Raleighe's man that brought a water for my Lord for the collicque, xx*s.*; for half an oz. of muske to make plaister, xxx*s.*; a pounde of tobacco sent to Belvoyre, xl*s.*: tobacco pipes, v*s.*

1607.—Given to Mr. Rigesley, of Newarke, phisision, being sent for to come to Henry Lynforde, by my Lord his comaundiment, xxx*s.*—Given to Mr. Alton, of Nottingham, phisision, as in rewarde for attending of my Lady and mistris at Belvoer, vl*i.*

1609.—Item paied to Mr. Doctour Percywalle, apothecary, for viij oz. of elixar of saltt, ij*li.* iiij*s.*; water distilled, a quart, vj*s.*; pylles, ij*s.* vj*d.*

1611.—Item, for a plaster for the gowte from Mr. Cranmer for my Lord, x*s.*

1612.—Item to Mr. Frederick and Mr. Guillian, chirurgians, for their attendance upon my Lord [Roger, Earl of Rutland] at Cambridge from the tyme of Mr. Guillian's comyng to Cambridge and for the incision made, j*li.*, and for embalmyng the corps, xx*li.*

1614.—Paid Fredrick, the surgeon, for imbalming the corps of Sir Olliver Manners, 30*li.*—Delyvered to Mr. Waters, of Stamffoord, when hee was sent for to my Lord Roasse, beeinge not well, iij*li.*—Paied the same daie unto John Hilton, his pothecarie's man, for apothecarie stuffe, viij*s.* iiij*d.*—Delyverd to Mr. Docter Ridgley, of Newark, for ten daies beeinge at Belvoire with my Lorde Roose, xl*i.*

1615.—To Docter Ridgley, for beeing at Garraion with my Lorde Roosse when he was not well, payd to him for vj daies, in goulde, vj*li.* xij*s.*

1618.—Paid to Docter Anthony for a dram of the essenc of gold, 6*li.*

1640, August 11th.—Item paid to Sir Daniell Delyne for two gree stones, whose virtue is good to cure the stone in the bladder or kydneyes, for which I [Earl of Rutland] have payd 3*li.* 5*s.* and am to have a twelv moneths tryall, and yf I do not like them I shall have 40*s.* for them againe.

1652.—Paid to my honourable Ladye's hands for Docter Preedian, at twise, for his care of Lord Roose, 50*li.*—Paid Mr. Turnor that pretends to cure my Lord, 9*li.* 5*s.*

1667.—Paid Mr. Price, Doctor Bacon's apothecary's bill for Lord Roos, 4*li.* 5*s.*

1679.—Paid to Docter Harwood when hee came to my Lord, 12 dayes, 12*li.*; given to his man that came with him, 5*s.*—Paid to Docter Deakcon for 3 dayes attending my Lord [John, eighth Earl of Rutland, died Sept. 29th, 1679], 3*li.*; paid to Docter Harwood for 10 dayes attending my Lord, 10*li.*; paid to Docter Atton for 10 dayes attending my Lord, 10*li.*—Paid to Mr. Wodard and Mr. Wood, apoptecary, as apears by his bill, for embalming my Lord, and fisyeck, 38*li.*

A NURSE'S EXPERIENCES.

THE *St. Mary's Hospital Gazette* for May contains a very interesting and instructive account of the German conduct towards British Red Cross nurses and doctors in Belgium, which deserves a wide circulation, for it should act as a strong incentive to recruiting among men of manliness and chivalry. Nurse Hilda Speak, after briefly describing the operations of the English ambulances in Brussels, tells how for a month after the coming of the Germans to the city they attended on English wounded prisoners there:—

"One day a German officer ordered all there to be locked up in a waiting-room, saying that they were acting as spies. They were thoroughly searched and kept there for thirty-six hours, until the American Consul interfered. A few days after an order was issued to the effect that all the English nurses and doctors were to go out of Brussels or they would be taken as spies. As there was no possible chance of our getting out of Brussels without help, the Germans were asked to find some means of seeing us away. After considering for some days we were told to be ready to leave on October 6th. .....At last we got into the train. In each compartment there were German soldiers. There were three other nurses in my compartment and two soldiers of the roughest and most objectionable type. They smoked and ate continuously until we reached Cologne, and would insist on having the windows closed. The carriages were the worst I have ever seen—hard wood seats and backs and very, very dirty. There were also soldiers riding on the top of the carriage. It took twenty-eight hours to reach Cologne; in ordinary times it takes four hours. The train crawled, and we seemed to stop every few minutes. During the journey through Belgian territory we noticed the awful devastation all along the line, many towns and villages containing only a roofless lot of ruins. Louvain appeared to be practically wiped out. Imagination can never picture the terrible ruin done to Belgium. At Stolberg, a small station just before Cologne, we were very roughly told to get out of the train. There I saw a young German officer take two of our doctors by the shoulder and throw them across the platform. At this point I was more alarmed than I had been since entering Brussels. Our luggage was all turned out on the platform and the soldiers searched it. All knives and forks were taken, surgical instruments, and even a nurse's fountain pen. After looking through our papers and a great deal of consultation, we were told to get into the train again by the soldiers, and we started for Cologne. I think if some of our young men in England had witnessed the treatment of the British Red Cross at this station it would help them to make up their minds as to where their duty to their country lies. There were twenty doctors; they could not retaliate, their only thought and care being for the hundred and twenty-four nurses who were in their charge in the country of the enemy. At Cologne we got our first meal, and were treated quite reasonably. ..... We still had a guard with us, and arrived at Münster at 7 A.M. on Oct. 8th, where we were evidently expected, and given breakfast at the station. It appeared to be a camp station: there were a great many soldiers round about. They gave us basins of coffee, sausage and bread. We washed our hands and faces under a pump, and felt much better for the food and wash. After an hour's wait we entered the train again. ..... We continued the journey, and that night had no light in the carriages. We arrived at Hamburg at 1 A.M. on Oct. 9th, but were not well treated there. We left the train for ten minutes, guarded by soldiers each side to a refreshment room, but we were waited on very badly, the food being practically thrown at us. ..... After travelling four days and three nights we arrived on the Danish frontier, and there we stopped for the German guard to leave the train. No one except those who have experienced it can imagine our feelings as we left the Germans behind and knew we were prisoners no longer. Then our destination was Copenhagen, where we were kindly received by the British Consul there. The people were exceedingly kind to us."

A significant sidelight upon the estimate by outsiders of the moral issues of the war is given by Miss Speak in the following grimly dour verse addressed "To the British Surgeons and Nurses Passing Copenhagen on Their Way from Belgium," which in English greeted them from the columns of a Danish newspaper on their arrival in Denmark:—

Silent we bid you welcome,
In silence you answered our greeting—
Because our lips must be closed
And your teeth set against the gale.
Our mouths are mute,
Our minds are open—
We shall greet you farewell in silence.
Sowers of good-will
On fields where hate is sown,
Fare ye well!

LEFT-HANDED SOLDIERS.

AN inquest has been held in London on a left-handed soldier who committed suicide, and there seems to have been a feeling that his left-handedness may have had considerable influence in depressing the man, for in reply to the question put to an officer in the man's battalion as to whether his left-handedness would make him awkward, the officer replied, "We have several who are like that, but we train them in time, and we also teach them to shoot from the left shoulder." Among the reasons assigned for left-handedness (excluding traumatic origin) have been heredity, left or right breast-feeding or carrying, mimicry of other children, functional nervous disease, and idiopathic epilepsy. Other reasons have been suggested, but the etiology is uncertain. The rate of percentage of left-handedness in this country is usually accepted as between 2 and 5 per cent. Among 17,000 school children examined in Berlin 5·15 per cent. of the boys and 2·98 per cent. of the girls were found to be left-handed. Left-handed Hebrews appear to have possessed as a rule more than ordinary skill in warfare, for in one army of 26,700 men, of the "chosen men" of the army, 700 were left-handed, and the context suggests that these were all the inhabitants of one town—Gibeah. Moreover, "every one could sling stones at an hair breadth and not miss" (Judges xx. 16).

WHAT IS A CONSULTANT?

To the Editor of THE LANCET.

SIR,—I am grateful to Dr. A. Charpentier for his letter in your issue of May 22nd. A consultant is sent for to, say, the Langham Hotel by an urgent message. Remembering it may be a case of life and death, would he go? He goes, and finds a case of acute tonsillitis, the patient having just arrived from Yorkshire. The sick man says to the doctor: "I wish you to attend me until I am well, and I will, of course, pay you £3 3*s.* a visit." What is the duty of the consultant?

I am, Sir, yours faithfully,
May 25th, 1915, ENQUIRER.

ICE.

THE hot weather will doubtless cause an increased demand for ice, especially for the wounded. It has long been a reproach to this country that the only man known usually to keep ice in hot weather is the fishmonger, whose sanitary environment is not always of the highest standard. The initial cost of an ice-safe is prohibitive to many, but practically its cost is soon saved in the value of food preserved and utilised which would otherwise have been lost. It has also been suggested that the milkman might carry ice for sale on his rounds. Ice production is a huge industry in the United States. The American Ice Company with the Knickerbocker Ice Company claim to be the largest manufacturers of ice in the world, and in 1911 there were 2004 ice manufacturing establishments in the United States with a capital of 118 million dollars. Their products were valued at 43 million dollars in 1909, as against 24 million dollars in 1904, and the number of employees was 19,041. This did not include the ice manufactured in breweries, meat, provision, and cold storage warehouses, and other industries that produce it for their own use. If in America ice is used too indiscriminately, in this country its use is too much neglected, and there is room for expansion on the right lines.

THE HOUSE-FLY.

Dr. A. Mearns Fraser, the medical officer of health of Portsmouth, has issued for his health authority a useful two-page leaflet explaining the dangers caused by the house-fly and how these dangers may be prevented. In the last paragraph Dr. Fraser says: "It has been stated that in a certain lunatic asylum one of the tests applied to find out if a patient is sufficiently recovered to be discharged, is to give him a broom and put him in a room with a water-tap turned full on. If he proceeds placidly to sweep up the water without turning off the tap, his standard of intelligence is not deemed to be high enough. The individual who endeavours to get rid of the fly danger by killing individual flies, and at the same time allows their breeding places to remain unheeded is intellectually not far removed."

Mr. J. H. E. Winston, Wills librarian, Guy's Hospital, continues the interesting and useful series of "Bibliographies of Guy's Men," with Nos. 4, 5, and 6, containing the bibliographies of the published writings respectively of Sir H. G. Howse (1869–1904), Dr. P. H. Pye-Smith (1866–1910), and Mr. Thomas Bryant (1856–1902). The preceding bibliographies, some of which have been noticed in our columns, are those of Sir Samuel Wilks, Mr. James Henry Targett, and Sir W. Arbuthnot Lane.

J. M. A.—According to "The Modern Materia Medica," published by the *Druggists' Circular*, New York, "Echafolta" is an eclectic preparation of the plant *Echinacea angustifolia*, intended as an internal antiseptic

and alterative. Dr. J. Coplin Stinson has written as follows, in the *New York Medical Journal*, concerning the plant: "Echinacea ..... is a mildly stimulating non-toxic, antiseptic, an antizymotic, alterative, anodyne, restorative, and aphrodisiac. It has been used internally in malarial disease, typhoid and other fevers, syphilis, diseases of the stomach, diphtheria, septic poisoning, anæmia, erysipelas, cancer, snake and other bites, and impotence; locally, in diseases of the teeth, gums, and throat, wounds, ulcers, sloughing, snake and other bites, hæmorrhoids, cancer, boils, carbuncles, urethritis, elytritis, different forms of erythema, erysipelas, and impotence." The remainder of the article is devoted to extolling its aphrodisiac virtues as a local application.

COMMUNICATIONS not noticed in our present issue will receive attention in our next.

Medical Diary for the ensuing Week.

SOCIETIES.

SOUTH-WEST LONDON MEDICAL SOCIETY, Bolingbroke Hospital, Wandsworth Common, S.W.

WEDNESDAY—9 P.M, Bolingbroke Lecture:—Sir W. Arbuthnot Lane.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

NORTH-EAST LONDON POST-GRADUATE COLLEGE, Prince of Wales's General Hospital, Tottenham, N.

MONDAY.—Clinics:—10.30 A.M., Surgical Out-patients (Mr. E. Gillespie). 2.30 P.M., Medical Out-patients (Dr. T. R. Whipham); Gynæcological Out-patients (Dr. Banister). 3 P.M., Medical In-patients (Dr. R. M. Leslie).

TUESDAY.—2.30 P.M., Surgical Operations (Mr. Carson). Clinics:—Medical Out-patients (Dr. A. G. Auld); Surgical Out-patients (Mr. Howell Evans); Nose, Throat, and Ear Out-patients (Mr. H. D. Gillies). Radiography (Dr. Metcalfe). 3.30 P.M., Medical In-patients (Dr. A. J. Whiting). 4.30 P.M., Special Lecture:—Mr. T. H. C. Benians: Pathological Data in Cerebro-spinal Fever and their Bearing on Diagnosis, Prognosis, and Treatment.

WEDNESDAY.—Clinics:—2.30 P.M., Throat Operations (Mr. Gillies). Children Out-patients (Dr. T. R. Whipham); Eye Out-patients (Mr. R. P. Brooks); Skin Out-patients. 5.30 P.M., Eye Operations (Mr. R. P. Brooks).

THURSDAY.—2.30 P.M., Gynæcological Operations (Dr. A. E. Giles). Clinics:—Medical Out-patients (Dr. A. J. Whiting); Surgical Out-patients (Mr. Carson); Radiography (Dr. Metcalfe). 3 P.M., Medical In-patients (Dr. R. M. Leslie).

FRIDAY.—2.30 P.M., Surgical Operations (Mr. Howell Evans). Clinics:—Medical Out-patients (Dr. A. G. Auld); Surgical Out-patients (Mr. E. Gillespie); Eye Out-patients (Mr. R. P. Brooks).

THE THROAT HOSPITAL, Golden-square, W.

MONDAY.—5.15 P.M., Special Demonstration of Selected Cases.
THURSDAY.—5.15 P.M. Clinical Lecture.

ROYAL SANITARY INSTITUTE, Civil Court, Guildhall, Bristol.

FRIDAY.—11 A.M., Provincial Sessional Meeting. Discussion on the Co-ordination of Military and Civil Sanitary Services in War time (opened by Lieut.-Col. D. S. Davies, R.A.M.C.(T.F.), and Mr. L. S. Mackenzie. The following are expected to take part in the discussion:—Mr. W. Harpur, Dr. W. G. Savage, Dr. W. H. Symons, Mr. J. Tubb-Thomas, and Mr. C. Wintle. 2.30 P.M., By motor-charabanc to Saltford to inspect the Bath New Sewage Works, and to Twerton to inspect the Pumping Station (conducted by Mr. W. H. Radford).

For further particulars of the above Lectures, &c., see Advertisement Pages.

EDITORIAL NOTICES.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITOR," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention should be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this office.

Lectures, original articles, and reports should be written on one side of the paper only, AND WHEN ACCOMPANIED BY BLOCKS IT IS REQUESTED THAT THE NAME OF THE AUTHOR, AND IF POSSIBLE OF THE ARTICLE, SHOULD BE WRITTEN ON THE BLOCKS TO FACILITATE IDENTIFICATION.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers—not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET *should be addressed "To the Manager."*

We cannot undertake to return MSS. not used.

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METEOROLOGICAL READINGS.

(Taken daily at 9.30 a.m. by Steward's Instruments.)

THE LANCET Office, June 2nd, 1915.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Rainfall.	Solar Radiation in Vacuo.	Maximum Temp. Shade.	Min. Temp.	Wet Bulb.	Dry Bulb.	Remarks.
May 27	30·110	N.E.	...	114	64	49	50	56	Fine
,, 28	30·080	N.E.	...	94	60	48	45	50	Cloudy
,, 29	29·804	S.W.	...	105	55	47	48	53	Cloudy
,, 30	29·920	N.E.	...	109	64	42	44	49	Cloudy
,, 31	30·174	N.E.	...	110	63	42	46	52	Fine
June 1	30·080	S.W.	...	89	64	48	49	54	Fine
,, 2	30·070	N.E.	...	106	72	50	53	59	Fine

The following magazines, journals, &c., have been received:—Journal of Tropical Medicine and Hygiene, Medical Chronicle, Review of Neurology and Psychiatry, Canadian Practitioner and Review, Annales de Médecine, Revista Médica del Uruguay, Archives of Internal Medicine, American Medicine, British Journal of Dermatology, Calcutta Medical Journal, American Journal of Obstetrics, Royal Prince Alfred Hospital Gazette, Quarterly Journal Microscopical Science, Ophthalmology, Interstate Medical Journal, Bulletin of the Johns Hopkins Hospital, British Review, Revue d'Hygiène, Revue de Gynécologie, Archivios d'Igiene, La Clinica Obstetrica, Journal of the Royal Sanitary Institute, Therapeutic Gazette, Journal of State Medicine, Practitioner, Medical Journal of South Africa, &c.

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